

Smart Partnerships:  
How Higher Education Institutions Can Enhance  
the Capacity of the UN to Govern the Global Commons

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## **Abstract**

This dissertation explores how partnerships between UN agencies and higher education institutions (HEIs) can enhance governance of the global commons. Unique attributes that HEIs have to offer in this regard include collaboration on development and dissemination of knowledge, the ability to design and test new technologies and systems, and the capacity to develop analytically rigorous research and evaluation. Many HEIs also explore issues across scales, sectors, and disciplines, and can act as neutral fora to promote dialogue. And all are educating future citizens and leaders. With the aim of highlighting the mutual value of partnerships between the UN and HEIs and also identifying where there are barriers and challenges in these relationships, I conducted two sets of research and analysis. First, using a set of criteria drawn from current literature on partnerships for sustainable development, I conducted a landscape review of UN websites to identify and assess what programs exist to engage HEIs. Second, I conducted semi-structured interviews with faculty members from three regionally diverse universities, each of whom has at least seven years of experience working with the UN, to gain their insights on the value of working with UN groups. My research demonstrates that UN agencies that engage universities meaningfully in developing solutions to sustainability challenges benefit from enhanced capacity, while HEIs stand to benefit from enhanced scholarship and recognition, access to resources, and the satisfaction of seeing theory translated into practice. It also demonstrates, however, that there is a need for clearer structures and robust programming.

Keywords: *global environmental governance, United Nations, sustainability, higher education sustainability, sustainable development, global commons, polycentric systems, multi-sectoral partnerships*

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## **Introduction**

While the United Nations is our primary mechanism for global governance, UN-based efforts to-date to govern the global commons have not been markedly successful (see, for example, Speth, 2010; Tollefson & Gilbert, 2012). Given the increasing urgency and complexity of our environmental, social, and economic challenges there is a need for fresh approaches. The weaknesses of the current approach to governance at the global scale include heavy reliance on national-scale policy; the absence of planning and structure for implementation; and insufficient mechanisms for accountability. This signifies that the current approach of mainly orchestrating global governance through UN entities and with national-scale policies is insufficient. In turn, this indicates that there is a need to consider how other sectors might become involved, whether partnerships or networks might more actively assist with implementation, and how outcomes might be better evaluated and made transparent. In other words, it is clear that there must be participation beyond the UN and national governments, even if that participation is still related to UN-based initiatives (Andonova & Levy, 2003).

This dissertation does not seek to challenge the United Nations as the central organization for global governance. It is apparent that while the UN system is roundly criticized for being heavily bureaucratic and sometimes even dysfunctional (Zifcak, 2009), with its comprehensive scope and 192 member countries, it is the only existing institution with the capacity to orchestrate dialogue and advance solutions to challenges of the global commons. The only other international bodies currently advancing global solutions to global-scale problems are limited in scope or in membership (Schwartzberg, 2013).

Examples of these include such the World Trade Organization, which has 160 member states but is narrowly focused on international trade adjudication (World Trade Organization, 2014), and the OECD, which is focused on fighting poverty and enhancing financial stability (Organisation for Economic Co-operation and Development, 2015a), but has just 34 member states (Organisation for Economic Co-operation and Development, 2015b).

Much of the recent governance literature and current policy dialogue emphasizes polycentric approaches to sustainability challenges (Galaz, Crona, Österblom, Olsson, & Folke, 2012; Santos & Pacheco, 2011). This makes sense particularly for complex global challenges such as climate change, transboundary pollution, and global urbanization trends: these are issues that must be considered at the global scale but will only be suitably addressed through various sectors and disciplines and at various scales. This speaks to a need to explore the viability of partnerships and networks for shared problem solving. While there is little empirical evidence to demonstrate that partnerships for sustainable development are effective (Biermann, Chan, Mert, & Pattberg, 2008), the literature indicates that partnerships for knowledge dissemination is one area where there is empirical evidence of efficacy (Andonova & Levy, 2003).

In recognition of the “well-established principle” that “sustainable development cannot be achieved by governments alone,” in 1992 the United Nations established “Major Groups” to foster active participation of a variety of stakeholders (UN Sustainable Development Knowledge Platform, n.d.). Today, these groups are defined as business & industry, children & youth, farmers, indigenous peoples, local authorities, non-governmental organizations, scientific & technological community, women, and workers &

trade unions (UN Department of Economic and Social Affairs, n.d.). It is notable that there is no category of Major Group that includes higher education institutions (HEIs). This means that if individuals from an HEI want to participate in a Conference of Parties (COP), for example, their institution must register under a category such as scientific & technical community or NGO. Following this line of thought, if a law professor from a public university wanted to attend a COP, his institution would have to identify with one of the Major Group categories, which would likely prove challenging. That law professor might bring value to the COP dialogue, even if it is only through side events and networking and not at the negotiation tables, so this is problematic. Building on this, my research focuses on the distinct and vital role that academic institutions can play based on their capacity for analytically rigorous research, the ability many have to serve as a neutral convening forum, their role in developing and disseminating knowledge, and the fact that they are educating the next generation of professionals, constituents, consumers, and leaders.

For this dissertation, I set out to examine alliances between HEIs and UN groups to identify benefits and barriers to partnership. The United Nations is huge, there are over 20,000 HEIs in the world, and the number and nature of collaborative relationships is seemingly infinite, so I narrowed my research down to two lines of inquiry:

1. What official mechanisms for participation do UN entities offer for HEIs?
2. From the HEI perspective, what are the benefits and barriers to collaborating with UN agencies?

My purpose with these two specific lines of inquiry was to establish that partnerships between UN agencies and HEIs offer value to both sides; to explore the current official channels for interested HEIs to become involved; and to gain insights into

steps that might be taken to enhance and build on these relationships. The value of this research is threefold: first, it has the potential to call attention to where there are gaps and opportunities in the UN system; second, it will highlight academic perceptions and realities of working with the UN; and third, it will contribute to the literature on partnerships for sustainable development.

To answer the first of these questions, I conducted a landscape review of UN websites. Starting with the full list of UN entities listed on the central UN website, I conducted several rounds of review to narrow down the list from 98 to six. I then reviewed the six organizations using a set of attributes derived from current literature on partnerships for sustainable development. The methodology for the review is described in Chapter 2. Chapter 3 offers a comparative distillation of key findings from the review.

For the second question, I conducted semi-structured interviews with faculty members from three universities. I selected institutions from three regions – North America, Europe, and Africa – and each of the three faculty members I interviewed has at least seven years of experience working with the UN. I then synthesized the responses from the three interviewees to extract key conclusions and structured the chapter around themes related to the benefits of working with UN groups, elements for success, challenges, and recommendations to other academics and to the United Nations. The methods for the interviews and analysis are explained in Chapter 2. Chapter 4 offers a narrative based on the analysis. It should be noted that since the information in this chapter is subjective, the concluding section is not empirical, but is based instead on the personal insights of the interviewees.

This dissertation concludes with a synthesis of the results of the landscape review and the interviews. In part, the conclusion offers a set of highlights of current UN-university partnerships, and perhaps more importantly it offers ideas for next steps – both in this line of research and for policymakers and academic institutions.



## **Chapter 1 Global Challenges, Local Actions (background and literature review)**

This dissertation examines the benefits and barriers of UN-HEI partnerships for improved governance of the global commons. To set the stage for this, this chapter offers literature-based context for several key concepts:

- *Sustainability*: definitions and current literature
- *Governance*: why the global scale; where the gaps are
- *Polycentrism*: definitions and current analytical trends
- *Universities as Allies in Advancing Polycentric Solutions*: unique attributes for supporting fresh approaches to global governance
- Partnerships for sustainable development: rationale; weaknesses; the role of HEIs

These concepts were used as foundational elements to the research conducted for Chapters 3 and 4.

### **Sustainability**

In 1987 the UN Report of the Brundtland Commission, *Our Common Future*, defined sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987). This statement was intended to reflect the need to address poverty around the globe, and to consider the limitations of the planet’s natural resources.

In 2005, the concept of sustainable development was further defined as the "interdependent and mutually reinforcing pillars" of sustainable development: economic development, social development, and environmental protection. At the time, this was

critical, as it spelled out the interconnected nature of these three concepts. It provided an infrastructure and a framework for important literature, treaties, and policies that used balance between these three as a foundation.

As we enter a new era of understanding of the complexities of sustainable development and the global commons, it may be time for the three pillars to evolve: while the language is intended to indicate the need for approaches that reflect these three critical strands, by their very nature, pillars are inflexible and autonomous. Continuing to emphasize these three elements as separate-but-related may result in mechanisms and institutions that sit comfortably within one of these three areas but address the other two only as additionalities. This has the potential to set the stage for two undesirable possible scenarios: in some cases decision-makers may rationalize policies by over-emphasizing one of these qualities over the others and in other cases the larger context may not be considered because policies are developed within the limitations of these elements.

In the spirit of the integration of the pillars, Gallopin and Raskin suggest that sustainability is a matter of balancing the growth and development of human society within the context of the finite limits of the planet (Gallopin & Raskin, 2002). They assert that sustainability should be considered a flexible, resilient system for the continued existence of the socio-ecological system. They build on the three dimensions of sustainability by adding specific details for each concept and indicating the flow of materials, energy, and impacts between the three (Gallopin & Raskin, 2002). For example, under the category of society they include population and culture, under economy they list agriculture, households, and industry, and environment includes land, atmosphere, hydrosphere, biota, and minerals (Gallopin & Raskin, 2002). Further, the Gallopin and Raskin model depicts the

fluidity that should be inherent to a systems approach to sustainability – showing that cause and effect flow in both directions.

Resilience is emerging as a term that embodies the three dimensions of sustainability as well as the dynamism and capacity to adapt as described by Gallopín and Raskin. In *Indras's Net and the Midas Touch*, for example, Leslie Paul Theile defines sustainability as “the quest for ever-greater resilience in an interdependent world” (Theile, 2011). Theile goes on to say, “To be resilient, a society or culture must sufficiently adapt to changing circumstances so as not to collapse” (Theile, 2011). Theile suggests that in addition to the three pillars, sustainability must take into account culture. Some might argue that the “human health and well-being” element of the typical definition of sustainability already integrates the culture aspect. This is detached logic, however. If, for example, it appears imminent that a small island developing state will lose its islands due to sea level rise, its people would be considered vulnerable in terms of environment, economics, and human well-being. There is a chance that relocating the people of that island to a more secure setting would suit all three pillars of sustainability. However, with the migration, the traditions and livelihoods of that nation would likely deteriorate and evolve in unpredictable directions. A scenario such as this connotes the imperative for an approach to sustainability that takes into account meta-scale policy and planning but also incorporates elements such as culture, adaptation, feedback, and flexibility.

Culture, technology, and resilience are all, therefore, particularly critical facets of implementation of sustainability initiatives. Goals and programs will be more effective if they are consistent with and account for the beliefs, values, and habits of groups and individuals. This level of sensitivity and accountability is not best-suited for the global

scale, however. Institutions and mechanisms must exist at multiple scales in order to tailor programs, collect data, incorporate feedback, and measure efficacy, which implies a need to employ stakeholder groups that will be sensitive to communities, individuals, and governments.

As a final note on the distinction between sustainable development and sustainability, while there is some literature to distinguish between these terms (see, for example Diesendorf, 2000), they are used interchangeably in most contexts. If anything, one could argue that the basic difference is that “sustainable development” is focused on responsible economic growth, particularly in developing countries, and “sustainability” reflects a broader aspect that can be applied to governance in an array of sectors with focus on improvement, not necessarily growth. However, these distinctions are nominal and further clarification is not necessary for this dissertation.

## **Global Governance**

Governance, the act of governing, pertains to the framework, systems, policies, entities, and procedures required to operate any entity. Discussion of good governance also brings up themes such as power, empowerment, accountability, and transparency. It is important to distinguish, however, that governance is not solely the responsibility of governments (Commission on Global Governance, 1995). In the 1995 report, *Our Global Neighborhood*, the UN Commission on Global Governance defined governance as “the sum of the many ways individuals and institutions, public and private, manage their common affairs” (Commission on Global Governance, 1995). More recently, Galaz defined governance as “humanly devised institutions, and the way we organize the interplay between state and non-state actors” (Galaz, 2014). There is no single model for governance, but an effective

system will be dynamic enough to incorporate a range of priorities and values (Commission on Global Governance, 1995).

The rate of globalization has accelerated significantly since the 1980s, which has resulted in complex and unavoidable interdependence between nations (Kjaer, 2004).

There are various approaches to global governance, yet successfully managing for some issues will rest solely on collective action (United Nations Environment Management Programme, 2012). Speth and Haas assert that there are four major categories of environmental challenges that should be addressed at the global scale:

1. Activities that impact areas of the planet that are beyond any nation's jurisdiction, such as the high seas and the upper atmosphere;
2. Transboundary pollution through media such as air and water;
3. Transnational activities that threaten local environmental resources but have global consequences, (e.g. deforestation in support of trade);
4. Local challenges with local consequences that are ubiquitous and would therefore benefit from knowledge-transfer (Speth & Haas, 2006).

These are robust categories that merit continued dialogue between nations. What has been problematic, however, is implementation of initiatives in support of global-scale conferences and compacts. This means that while international negotiations will continue to be imperative, the next phase of planning and execution must also include and build on programs that reflect carried scales and drivers of implementation. This need is borne out by the following sections of this chapter.

## **Governing the Global Commons: recent trends**

The current mechanisms for governing the global commons have not been effective.

Evidence for this assertion lies in a broad set of indicators related to the various meta-scale measurements that show continued environmental degradation despite 40 years of active efforts to advance sustainable development (Speth, 2010; Tollefson & Gilbert, 2012). In advance of the Rio+20 conference, for example, the journal *Nature* published a “Rio Report Card,” an article aimed at assessing progress on the three main accords that emerged from the 1992 conference: the UN Framework Convention on Climate Change, the Convention on Biological Diversity, and the UN Convention to Combat Desertification. The article demonstrates that while there has been progress in some programmatic areas related to each of these treaties, each had earned an ‘F’ in terms of achieving its intended goals (Tollefson & Gilbert, 2012). The authors point out that these treaties had been developed with intentionally broad language in order to ensure compromise between developed and developing countries (Tollefson & Gilbert, 2012). At the time, the aim was to foster on-going dialogue that would lead to more ambitious goal-setting. That none of these treaties accomplished its original overarching goal is evidence that there is a need for a new approach to setting goals, framing implementation, and establishing accountability. Rio+20 was widely viewed as unsuccessful, and even dubbed the “longest suicide note in history” by Kumi Naidoo, then-executive director of Greenpeace International (Walsh, 2012). This is an indication that there remains a need to identify and manage the weaknesses of the current tactics for governing the global commons.

### **Weaknesses in the current approach to governing the global commons.**

Global governance for sustainability today is conducted mainly through the United Nations, and is typically based on dialogues between nation states. International-scale dialogues are requisite – imperative, even. However, there are several major flaws with the current system. Three major themes that emerge in the literature are reliance on national-scale policy; the absence of planning and structure for implementation; and insufficient mechanisms for accountability.

- *Reliance on national-scale policy:* The nature of the typical sustainable development compact or accord is that it is reliant on complementary national policy. This model is problematic in several ways. First, it effectively excludes non-governmental stakeholders and actors at various scales of governance – while NGOs, business, and others have been invited to conferences and negotiations as observers, they are not empowered to officially influence or implement documents related to the dialogues. Second, national governments may lack the wherewithal or political will to translate global accords to national policy. In wealthy democracies, passing federal policy can be politically charged – as was the case with the Kyoto Protocol in the United States. In developing countries, commitment to long-term international environmental treaties is frequently hindered by urgent priorities, such as the need for immediate access to food, shelter, and water (Recchia, 2002). Finally, in any given national political forum, effective implementation can be hindered by the silos that typically characterize government ministries and system – distributing responsibility is difficult if a complex issue such as climate change mitigation or adaptation does not fit neatly into an existing government body (Recchia, 2002).

- *Implementation:* Esty and Ivanova suggest that the single biggest barrier to success is that multilateral treaties tend not to focus on implementation (Esty & Ivanova, 2002). Not only is there a lack of institutional support for the various treaties (Speth, 2010), agreements are often finalized without specific language related to financing or knowledge transfer. Even those treaties that are better-worded for implementation may be constructed in a way that hinders progress. The Millennium Development Goals, for example, are based on eight distinct concepts. While the goals are intimately linked – it can easily be argued that the eradication of poverty is directly related to improving health and the environment – the document is constructed in a way that treats these elements as separate. This has caused confusion in terms of national-scale implementation, and in some cases has resulted in misallocation of funds and resources (Schipper & Pelling, 2006).
- *Accountability:* Most of the multilateral environmental agreements that exist today are non-binding (French, 1994) and quite a few contain language that discusses the major concerns that should be addressed without setting any goals or identifying tactics. Further, those that do have targets may be handicapped by political agendas and tensions. In the case of the Kyoto Protocol, the US negotiators played a major role in the construction of the accord, and signed it during the UN Framework Convention on Climate Change Conference of Parties in 1997. Due to national politics the United States never ratified the Protocol, however, nor has any significant climate change legislation been passed since. In subsequent negotiations, there have been tensions between the United States and larger developing countries regarding equity in terms of financial growth and prosperity. Along these lines, it



should also be noted that those compacts that do have goals typically lack teeth. It is unlikely that governments would participate in global compacts that would demand penalties for non-compliance, so the goals are generally set forth on the foundation of good citizenship.

The upshot is that while there may not be consensus as to the primary reason that the current global environmental governance regime is not thriving, there is certainly agreement that it has not been effective to-date. Being confined by the current mode of multilateral negotiations and national-scale implementation, these barriers are not easily overcome (Speth, 2010). In order to be more effective, the next generation of agreements and institutions will have to evolve in a way that engages non-governmental groups, fosters collaboration between UN programs, and offers reliable and consistent feedback on the viability of policy and implementation initiatives. The United Nations will continue to be a facilitator, and national governments will still be involved as architects and negotiators, but the success of future endeavors will rely in part on the active participation of multiple sectors and implementation of initiatives at various scales.

### **Next Steps for Global Governance: solution distillation**

To use Leach's term, there is no single way to shift from unsustainable paths to a sustainability "super-highway" (Leach, 2013). In the ample literature on the complexity of sustainability challenges and solutions (see, for example, Harris, 2007; Homer-Dixon, 2002; Vitek & Jackson, 2008), there is a tendency in these to create proscriptive distillations of what is and should be happening. For instance, Leach offers four "practical ways forward" deliberating goals, mobilizing citizens, building networks, and exploiting openings in political and policy structures (Leach, 2013). Similarly, Wijkman and Rockström offer three

steps toward striking a better balance between humans and nature: “A relative consensus on the problems we face; a well-articulated vision of what kind of society we want to see in the long term; and a strategy for the transition itself, to guide society from the position in which we find ourselves today to that place evoked by the vision” (Wijkman & Rockström, 2012). Looking at the challenges through the lens of technology, Galaz suggests that there are two broad areas of research that need more attention: first the “institutional architecture” and whether it is structured in a way that will effectively address the complexity of global environmental challenges; second, the benefits and barriers of “polycentric order and international actor collaboration processes,” which he contends may be able to supplement weaknesses in the current institutional architecture (Galaz, 2014).

### **Polycentric Approaches to Governing the Global Commons**

Vincent Ostrom and his colleagues defined polycentricity as “[connoting] many centers of decision making which are formally independent of each other” when they published their research on a theoretical inquiry into municipal governance wherein they sought to strike a balance between entirely autonomous government agencies and completely centralized governance (V. Ostrom, Tiebout, & Warren, 1961). Later, Nobel Laureate Elinor Ostrom conducted significant research on the application of this concept for the purpose of natural resource management. E. Ostrom emphasizes that “global problems” are not caused globally and cannot be solved entirely at the global level (E. Ostrom, 2008). She asserted that global solutions are time-consuming and tend to be ineffective if they are not undergirded by implementation efforts at various scales (E. Ostrom, 2008). Further to this, in 2012 Santos and Pacheco write that “...cooperation will be maximized when risk is high

and groups are small because goal achievement involves stringent requirements” (Santos & Pacheco, 2011). Building on this, in 2013, Vasconcelos and his colleague demonstrate that local groups are better equipped than larger-scale groups to respond to risk quickly and with measurable results. Building their experiments and assertions based on scale, Vasconcelos et al. state, for example, that “unlike global institutions, often associated with marginal improvements of cooperation, local institutions promote group coordination to avoid a collective disaster, mostly for low perception of risk” (Vasconcelos, Santos, & Pacheco, 2013). Galaz et al. take a different tact. Rather than considering group size in the context of global v. local, they advance a model for the organization of like-institutions through networks (Galaz et al., 2012). This concept has the potential to build on the empirical findings of the Vasconcelos study, as the network groups are still effectively small, but could arguably be more effective because of their shared interests and geographic distribution.

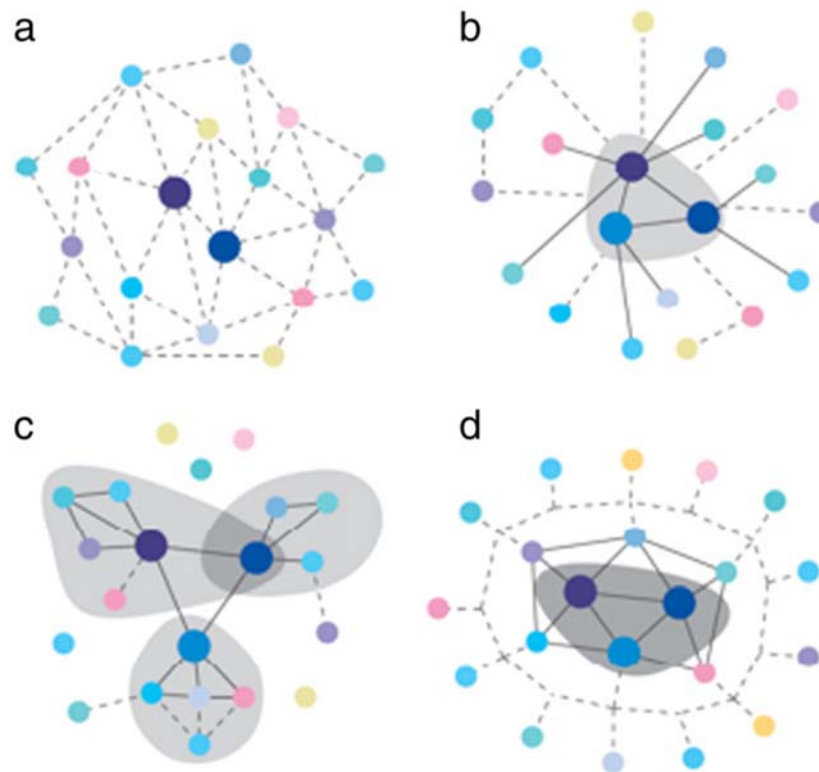
Polycentrism is a consistent theme in the UN outputs as well. The outcome document of the 1972 United Nations Conference on the Human Environment, which marked the inception of the concept of global environmental governance, declared “To defend and improve the human environment for present and future generations has become an imperative goal for mankind...To achieve this environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts” (United Nations Environment Programme, 1972). Agenda 21, which emerged from the 1992 Earth Summit, references programs that integrate national, state, provincial and local scales (United Nations, 1992), and in 1995 the *Report of the Commission on Global Governance* offered

strong recommendations for polycentric decision-making built on input from diverse stakeholders and the establishment and leveraging of networks to advance knowledge transfer and capacity building (Commission on Global Governance, 1995).

While these historically significant documents offered sound rationales for national, sub-national, and inter-sectoral policymaking and implementation, frameworks for establishing such approaches have been vague. The lack of clarity, accountability, financing, and systemic approaches for engaging stakeholders may be due to the tendency to center such dialogues on issues rather than actions. And as indicated above, the lack of political will of national governments can also stymie efforts at all scales. Despite these factors, the evident imperative for more proactive sustainability agendas has prompted sub-national and non-governmental entities around the globe to take proactive steps: many cities committed to the Kyoto Protocol, for example, and numerous companies have developed protocols for Corporate Social Responsibility.

Until recently, these efforts have been largely disconnected from each other – both within and between sectors. With increasing awareness, knowledge, and technologies, there appears to be a shift toward enhanced coordination within and among these sectors, however. Galaz et al. suggest that there are four stages of polycentric coordination (Galaz et al., 2012). As illustrated in Figure 1, the first stage reflects a set of organizations communicating about a cause or set of causes. During the second stage, those groups start to develop formal partnerships and coordinate on goals. In the third phase, various actors commit to and execute shared projects. The final, strongest, stage is achieved when the groups have formalized strong ties and have developed a portfolio of shared initiatives. Because of the highly collaborative nature of this final phase, it also typically requires some

structural changes to the participating organizations – especially for the purposes of problem solving and dispute resolution (Galaz et al., 2012).



*Figure 1.* Illustration of “weak” to “strong” polycentricity as defined by Galaz et al. Colors of nodes illustrate the diversity of actors, and sizes of nodes illustrate the relative importance of actors in the evolving network (Galaz et al., 2012) – reprinted from Galaz et al. with permission from Elsevier. See reference list for full citation.

Over the past 10 years or so, NGOs, businesses, state- and municipal-level governments, faith-based and grassroots groups, universities, and other groups have increasingly transitioned toward standardized reporting and assessments of best practices and even shared goals and commitments. In terms of the Galaz et al. definitions, most of these groups have migrated from Stage A to B, and many are moving into Stage C. There are now several emerging efforts – such as the Global Reporting Initiative – that are theoretically designed to transcend sectoral lines and promote information-sharing

broadly. This is uncharted territory, however, so the going is slow and the efficacy of these efforts has yet to be proven. In addition, it is not currently clear whether these endeavors are being constructed in a manner that supports global governance priorities.

### **Universities as Allies in Advancing Polycentric Solutions**

The particular qualities of polycentric systems that are gaining the attention of environmental governance scholars include that they are mechanisms for self-organization that span scales and sectors and that they enable experimentation and learning at multiple levels (Galaz et al., 2012). Galaz et al. assert that these qualities are imperative in the face of managing complex systems (Galaz et al., 2012). Based on these criteria, universities are well-suited to cultivate and participate in the development and implementation of polycentric strategies. Universities can and do work across all scales—informing local, state, and federal levels of governance—and frequently they partner with the private sector and non-governmental organizations. They have the capacity to develop new technologies and trans-disciplinary approaches to complex problems and to collaborate on knowledge dissemination. Additionally, there are over 20,000 higher education institutions worldwide, with communities ranging in size from hundreds to hundreds of thousands of students (Pérez, n.d.). While the nature and context of these institutions varies dramatically, regional and international university sustainability networks are emerging with the shared purposes of information exchange and shared solutions.

One factor that may have limited the role of university participation to-date in devising new solutions to sustainability governance is perception. Universities lack the financial profile that makes corporate sustainability conspicuous and desirable, and they do not have the cultural cache of indigenous or faith-based groups, so sustainability in

higher education is often pigeonholed either into environmental education or into operational programming such as student-oriented recycling competitions or campaigns to turn the lights off. While some campus sustainability programs merit these limitations, applying these filters is detrimental both to the larger aim of reinvigorated governance of the global commons and to the universities themselves. The missions of these institutions relate to teaching, research, and service, which are exceptional strengths when advancing sustainable development initiatives. The participation of universities also brings with it the intellect and expertise of the faculty, which means that research, investigation, and data collection and analysis can become applied and experiential learning. In turn, this can enhance the capacity of UN and government programs as well as that of other sectors: Because HEIs typically function on longer planning cycles than companies and their metrics for success are not directly tied to profit, they are subject to less risk than businesses when testing emerging technologies and systems (University of British Columbia, n.d.). Finally, many universities have the capacity to act as neutral fora for dialogue and exploration (Carcasson, 2010) – a valuable quality that can help to transcend the political tensions that frequently encumber UN discussions.

Beyond the intellectual benefits of university engagement, many universities have the unique attribute of functioning effectively as microcosms of society: providing transportation, food, energy, shelter, and community for students, faculty, and staff. This offers the potential of boots-on-the-ground applications of new systems and tactics. The integration of the mission of a university with its operations – the emerging concept of the campus as a living lab – has tremendous potential both in terms of identifying replicable

and scalable concepts and in offering the students who occupy those campuses both a robust culture of sustainability and hands-on learning opportunities.

A final point in favor of universities as valuable players in advancing polycentric approaches to governing the global commons is the adaptive nature of such systems. On the intellectual side, faculty members must continually break new ground in order to maintain professional status. Logistically, a university community is constantly evolving as classes graduate and new students matriculate, a dynamic that offers two opportunities: the advantage of fresh perspectives and inspirations and the chance to train tomorrow's professionals.

To be clear, not all higher education institutions are able to embrace all of these qualities, and the nature of academia does have its detracting factors as well: Faculty members may be committed to empirical integrity in a way that precludes applied research. Student participation on data collection or experiments may compromise the reliability of project implementation. Non-faculty staff members can be effective champions, but may also be subject to competing demands and priorities. Funding restrictions – either in terms of financial resources available or stipulations from funding sources – may influence the structure of projects. Similarly, public institutions may be subject to strict oversight from government agencies. These potential complications are not enough to eclipse the positive factors that position universities as critical catalysts for enduring change, however. The combination of how higher education institutions function as systems, their focus on solution-seeking, and their capacity for knowledge transfer render them foundationally well-suited to cultivate and participate in polycentric approaches to governance of the global commons.



### **University sustainability: mission v. operations.**

When considering universities and sustainability, it is critical to recognize the distinction between the mission of an institution and its operations. An institution's mission defines its very fiber – literally its purpose for existing. All programming and production associated with a particular organization should be consistent with its mission. In the case of universities, the mission will be a direct reflection of the teaching, research, and outreach that comprise the fabric of higher education. Operations refers to the systems and resources that make the place “go.” This includes policies and systems related to energy, food, procurement, water, buildings, transportation, and more. On the mission side, a university with an advanced culture of sustainability will demonstrate the integration of sustainability into a diverse range of disciplines, such as economics, religion, humanities, and health. On the operational side, sustainability can and should offer students and employees a sense of shared values – a culture of sustainability that is evident to all members of that community.

A strong organization will typically have a mission that is relatively impervious to external stimuli, but that may not be the case for operations. A typical university has systems of checks and balances in place to ensure that the teaching, research, and outreach of the institution are consistent with its mission (Whitfield & Hickerson, 2012). So while it is expected that the mission of an entity will inform its priorities and programming with little compromise, outside influences have the potential to seriously influence decisions and patterns related to operations. Examples of this include:

- A spike in gas prices may inspire carpooling, while a dip could have the reverse impact.

- The cost differential between tipping fees for disposal of solid waste and the revenue for recycled materials may offer an incentive to press for improved recycling rates.
- Financial restrictions may limit an institution's commitment to organic or local food.

Thus, when considering the value of higher education institutions as allies for sustainable development solutions, it is important to identify tactics and indicators related to operations – such as strategic planning and establishing a culture of sustainability – as well as the capacity of such institutions to advance scholarship and research solutions.

#### **Access v. waste.**

Among higher education institutions in the United States and probably most other developed countries, sustainability programming is largely focused on reducing waste – particularly in terms of energy, food, refuse, and water – and on enhancing elements such as the percent of the cafeteria food that is local and / or organic. In a developing country, it is likely that access to resources will be of more concern than waste. For example, HEIs in least developed countries may struggle with inconsistent electricity supply and on-campus recycling efforts may not be necessary because there may be an “unofficial” sector of waste-pickers that rely on resources from the institutional waste stream. At the same time, universities in developing countries have the capacity to support critical solutions to issues related to natural resource management such as food security and access to potable water. If, for example, research at a national university were to align with a national agenda or set of policies, that university would not only contribute to the policy goals, but would also train current students to be a part of future solutions (Retta & Desse, 2012).

### **Applied scholarship.**

The concept of applied teaching and research is a growing trend that has the potential to build a bridge between an institution's operations and its mission, and also to capitalize on the other institutional strengths of HEIs. Currently the most common term for applied research is "campus as a living laboratory," which defines a program that encourages teaching and research that directly involve the campus (König & Evans, 2013). Faculty members offer their students real-time on-campus scenarios as research projects, and in many cases outputs from academic work are then applied on campus. This has the benefits of offering a rich learning experience while enhancing environmental and social conditions in and around the university. Campus as a Living Laboratory can therefore be a valuable and empowering tool for on-campus sustainability efforts. At the same time, this moniker may limit engagement, as the term laboratory may not resonate with those not in natural science disciplines and the value of applied research is frequently beyond the walls of the institution. For example, an engineering professor who develops a cleaner-burning cook stove will likely significantly improve lifestyles in developing countries, but the impact on campus will mainly be in teaching about the process of developing and testing that technology. It is therefore important to consider applied scholarship across disciplines and scales in ways that highlight the value of academic research and teaching in developing and disseminating analytically-sound solutions.

### **Partnerships for Sustainable Development**

Because this dissertation specifically focuses on collaborative relationships between higher education institutions and UN entities, this final section of the background and context

chapter offers some insights into recent literature on partnerships for sustainable development.

Language developed in anticipation of the 2002 World Summit on Sustainable Development (WSSD) emphasizes that partnerships for sustainable development should adhere to a universal set of guiding principles that emphasizes local involvement and the global context, linkages to globally agreed outcomes, tangible results, transparency and accountability, and integrated and multidisciplinary approaches (United Nations, 2002). These principles further emphasize that these partnerships should be voluntary and mutually respectful and offer new and/or added value to participants. Funding mechanisms and availability should also be clearly established at the outset (UN Department of Economic and Social Affairs, 2013). The “Plan of Implementation” that followed the WSSD highlighted the value of partnerships in a variety of contexts, including public-private, North-South, community-based, and in the interest of dealing with specific topics such as agriculture, energy, and chemicals (United Nations, 2002). Building on this, today the UN Sustainable Development Knowledge Platform states “Partnerships are considered one of the most participatory and effective mechanisms to implement sustainable development and enhance international cooperation” (UN Department of Economic and Social Affairs, 2013).

These concepts appear to indicate that the UN is eager to engage a variety of stakeholders and may even imply that there is concrete evidence to suggest that partnership is an effective tool for advancing sustainable development. The literature on partnerships for sustainable development offers mixed results, however. This section offers a distillation of the rationales for multi-stakeholder partnership for sustainability,

discussion of partnership types, and salient points from the literature on the strengths and weaknesses of the multi-stakeholder partnership approach to sustainable development.

### **Rationale.**

Biermann et al. offer a concise summary of the three areas where partnerships have been touted as tools for addressing gaps in sustainable development governance: regulation, implementation, and participation (Biermann et al., 2008). In terms of functionality, four basic categories emerge from the literature on partnerships for sustainable development: to raise awareness, to facilitate dissemination and accreditation of information, to provide technology assistance in management of specific issues, and to develop new products (Glasbergen, 2007). Finally, Binkerhoff suggests that there is a “causal chain” to the contribution of partnership for good governance: structure, process, and outcomes, with the process including feedback of success and efficiency into both the process and the prerequisites for this chain (Binkerhoff, 2008).

### **Strengths.**

In the context of developing multi-stakeholder solutions, partnerships have the capacity to enhance efficiency and effectiveness, enhance inclusion in decision-making and access to resources, and create opportunities for participation and implementation that would not otherwise have existed (Brinkerhoff, 2008). Some literature indicates that partnerships and similar networks may be able to fill gaps in governance and support implementation (Andonova & Levy, 2003). Creating opportunities for non-public sector stakeholders to take active roles recognizes interest and expertise as well as distributes accountability. In opening opportunities, there is potential to enhance non-public sector opportunities such as market value (Glasbergen, 2007), which may be of interest to the

business sector, for example. Finally, there is evidence to support that these partnerships do reinforce collaborative relationships, but they tend to be among existing institutions and states, which implies limited additionality (Biermann et al., 2008). Figure 2 offers an overview of the strengths of partnerships for sustainable development.



Figure 2. Strengths of partnerships for sustainable development

### **Weaknesses.**

Multi-stakeholder partnerships may be intrinsically limited by competing priorities of various sectoral groups and the fact that the institutions who seek to establish these relationships may do so in response to criticism for underperformance (Andonova & Levy, 2003). Along these lines, they also tend to be led and dominated by powerful entities – frequently intergovernmental groups – that will prioritize initiatives that will reflect well on the performance of that institution, and may not be in the best interests of other partners. In addition, while claims about the efficacy of and need for partnerships are myriad, there is little empirical evidence to substantiate their value (Biermann et al., 2008) and they are frequently based on supply of participants rather than demand for particular needs (Andonova & Levy, 2003).

As referenced above, the participation gap is one area where partnerships have proven effective, but only in a limited capacity. Of the other two gaps identified above, empirical assessments of partnerships aimed at addressing regulatory and implementation gaps demonstrate poor results (Biermann et al., 2008). That said, while the literature to-date offers lively debate on the pros and cons of partnership as a tool, it is unclear that a viable mechanism for measuring effectiveness exists. For example, Biermann et al. assess the efficacy of partnerships in addressing the implementation gap using indicators relating to sufficient capacity of partnerships, new and additional resources, direct impact, and least developed regions (Biermann 2007). A question arises here, however, as to whether these are the most effective channels. While these categories may well be of value, it not entirely clear whether distributing funds directly to a least developed country institution is more effective than putting those same funds into a developed country institution with stronger expertise and additional resources to focus on the same challenge.



Figure 3. Weaknesses of partnerships for sustainable development

### **Implications for higher education collaborators.**

Evidence does suggest that existing partnerships tend to enhance relationships between UN entities and states and that engagement of institutions belonging to “major groups” tends to be limited to partners with particular strengths or assets (Biermann et al.,

2008). While this implies that what might be labeled as typical patterns of exclusion prevail, it is important to note that very little literature has been produced on this topic between the conclusion of Rio+20 and today. I would assert that the process of drafting the Sustainable Development Goals and the progress toward a more comprehensive and inclusive climate change accord in 2015 will offer fresh pathways for and interest in effective partnerships. In this context, the three gaps – regulation, participation, and implementation – are all likely to be of interest to scholars.

It is important to note that there is evidence to support the viability of the partnership approach, particularly as it relates to how higher education institutions might be engaged. Partnerships and multi-stakeholder networks are particularly effective for the distribution of knowledge, particularly when a scenario merits input from a variety of experts (Andonova & Levy, 2003). Similarly, partnership is a viable tool for developing tailored solutions to complex issues and addressing niche problems that require adaptive capacity (Andonova & Levy, 2003). I assert that these characteristics combined with the criteria spelled out by the WSSD documents offer a strong foundation for successful alliances between UN entities and universities.

To conclude this chapter, there is a real need to revitalize governance of the global commons. The United Nations will continue to be central to these efforts, but the heavy reliance on governments of nation states as the drivers of change is evolving. The academic literature and United Nations documents call for partnerships and networks to enhance capacity for regulation, implementation, and evaluation. Higher education institutions have exceptional assets to offer in these regards, with the added benefit that the opportunity to



participate in processes and programs can enhance scholarship and provide fresh opportunities for students. These overarching conclusions will inform the structure of Chapter 3, which identifies and assesses current UN programs to engage universities, and Chapter 4, which offers insights from three faculty members who have long-standing relationships with the United Nations.

## **Chapter 2 : Methods**

Several assumptions anchor my research. First is that the current mechanism for governing the global commons are not sufficient. Second is that UN entities would benefit from additional resources for regulation and implementation. Third is that higher education institutions (HEIs) have capacity to fill some of the gaps and address some of the weaknesses currently exhibited by UN initiatives. Fourth is that there is that a set of HEIs are interested in participating in these processes. Fifth is that there is reciprocal value to these relationships. In support of this, I set out to explore existing partnerships and determine what might be learned in order to inform additional and enhanced relationships – should they be recommended.

### **Narrowing in on the Subjects**

For my dissertation, I was committed to researching the value of partnerships between HEIs and UN organizations in the interest of both sides. Given the size and complexity of the UN system and the number of HEIs in the world, I determined that I needed to take a very targeted approach. I conducted a broad literature review to explore key concepts related to governance, sustainability, partnerships, and the potential assets of universities as partners. I used key concepts from this research to inform a landscape review of UN programs aimed at engaging HEI partners. Following this, I developed a collective case study of university perspectives on UN collaboration. The literature review was foundational to the landscape review and semi-structured interview questions and as well as the analysis for the case study.

## **Landscape Review**

Competitive Landscape Review – sometimes called competitive landscape assessment or competitor analysis – is a technique frequently employed by businesses to determine their own strengths and weaknesses in comparison with their peers or competitors. In his description of “competitor analysis,” Porter references it as a tool to “develop a profile” of business competitors in order to anticipate actions and reactions in particular industries and enhance strategic planning. He offers two overarching questions for framing such an analysis: “what drives the competitor?” and “what the competitor is doing and can do” (Porter, 1998). He then provides four sets of criteria to support these questions: future goals, current strategy, assumptions about the industry, and the strengths and weaknesses of the competitors. Data points collected in these categories then inform what Porter calls a “competitor response profile” (Porter, 1998).

The purpose of a competitive landscape review is to derive a strategic advantage – mainly driven by profit and customer base – so this is not a model I could apply directly. I used a similar tactic of reviewing a set of entities using a set of questions, however, which allowed me to effectively create a profile for each of the groups I reviewed. This subsequently informed my analysis of the strengths and weaknesses of current UN-based programming aimed at HEIs. This work was broken into four stages:

1. Establish basic qualifying criteria for UN groups and assess all entities listed on the UN website against the criteria
2. Based on the literature review, establish lines of inquiry and partnership types

3. Evaluate programs offered by UN entities selected through the first process against the lines of inquiry identified under the second process. Where possible, qualify the programs by partnership types.
4. Synthesize the results across agencies.

As illustrated in Figure 4, these steps led to a narrative on the strengths and gaps of the programs that are currently offered.

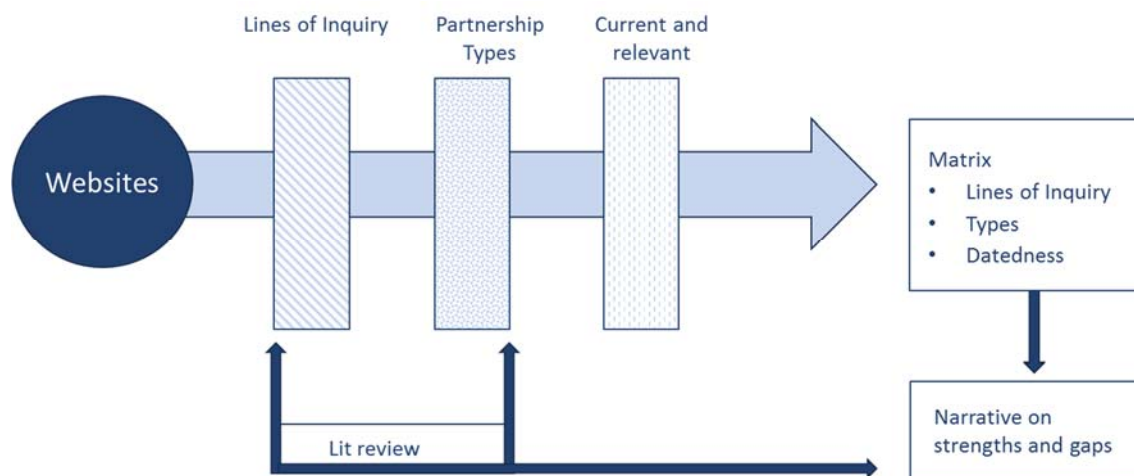


Figure 4. Landscape review process

My original plan was to enhance the landscape review with a survey for participants, but early attempts to contact UN officials were not successful. I therefore decided to focus my research entirely on what is available online as though I were a potential university participant. While it is likely that UN entities and professionals have myriad ways of engaging university professionals, online resources seem an important portal for communicating robust programming and opportunities.

### **Selection process.**

I started the landscape review by creating a matrix of all entities listed on the UN website. For the first filter, I eliminated all with foci that are mainly unrelated to environmental sustainability – for example, the UN Institute for Disarmament Research and the International Computing Centre.

The second step was a brief review of the websites of agencies with potential for cross-over to environmental sustainability, such as the World Health Organization and the Commission on Population and Development. The purpose of this was to determine whether there were any particularly robust models of HEI collaboration. While several of these organizations do have university-oriented programs, I was able to eliminate most because those programs tended not to focus on environment or sustainable development. For example the International Maritime Organization established the World Maritime University for the purpose of supporting post-graduate research in maritime affairs. Environmental management is a component of this, but it is not the primary focus (World Maritime University, n.d.). While this program appears to be an excellent model for collaboration, I opted to exclude because it is not sustainability-specific.

For the third phase, I examined the websites of the remaining 34 groups – searching for key terms such as university, higher education, academia, partnership, students, etc... and reviewing programs for mention of alliances with universities. Through this process I was able to eliminate 14 groups whose websites showed limited or no evidence of partnerships or networks with universities on projects related to sustainability or the environment. Deeper examination of the website of the remaining 19 showed that four offered robust models of engaging universities. Based on their statements related to

mission, history, and objectives, I included an additional two entities that do not currently have official mechanisms, but that clearly maintain active collaborations with academia. As per Figure 5, each level of the landscape review involved an increasingly-detailed exploration.

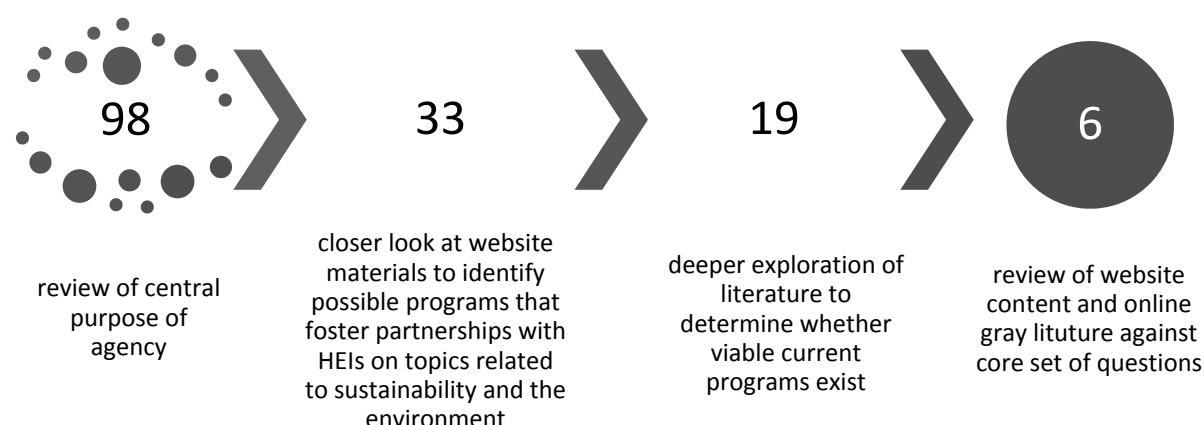


Figure 5. Phases of the landscape review

### **Lines of inquiry and partnership types.**

As referenced in Chapter 1, the 2002 World Summit on Sustainable Development (WSSD) resulted in a concerted UN-based push for multi-stakeholder partnerships. The criteria offered in the documents leading up to that conference include that partnerships for sustainable development should adhere to a universal set of guiding principles that emphasize local involvement and the global context, linkages to globally agreed outcomes, tangible results, transparency and accountability, and integrated and multidisciplinary approaches. The WSSD documents further specify that partnerships should be voluntary and mutually respectful and offer new and/or added value to participants and that funding mechanisms and availability should also be clearly established at the outset (UN

Department of Economic and Social Affairs, 2013). Building on this as well as key themes established through my literature review, I established six lines of inquiry to use while exploring the website materials of my selected UN programs:

1. Is it clear that program supports the UN agency's mission?
2. Are the benefits of participation evident to possible university partners?
3. Is there evidence of value-added, and is it reciprocal?
4. Does the program seem open and accessible to new participants?
5. What other stakeholder groups are involved?
6. Are there notable milestones or deliverables?
7. Are there clear indications of transparency and accountability?

In seeking answers to these questions, my aim was to explore each UN entity's materials through the lens of a prospective HEI participant. This is not intended to be an evaluation of effectiveness or efficacy, but in applying the same inquiries to each group there may be some comparative conclusions about accessibility and the state of each the online outreach materials or each group. To the extent possible, the answers to these questions are integrated into the narrative of Chapter 3. In addition, using the key attributes discussed in the Partnership section of Chapter 1, each of the programs reviewed in Chapter 3 is categorized by partnership type:

- **Knowledge Transfer:** designed to raise awareness and facilitate dissemination and accreditation of information.
- **Implementation:** established to enhance development of tailored and/or adaptive solutions to complex issues.

- **Capacity Building:** created to provide technology assistance in management of specific issues and/or to foster development of new products and services.
- **Participation:** designed to enhance stakeholder inclusion in decision-making and offer access to resources and additional partners.

Where possible, I categorized each partnership program as a part of my analysis.

While the landscape review is not intended to evaluate competitive factors in the UN agencies reviewed, that chapter does conclude with a synthesis of the results across entities. The purpose of that exercise is not to evaluate the programs, but to demonstrate some key conclusions both comparatively and in the aggregate that may inform next steps.

### **Collective Case Study**

My initial intent was to develop a set of brief case studies of universities that actively partner with UN programs to offer insights into the benefits and barriers of each set of relationships. To this end, I used my literature review to develop a set of questions for semi-structured interviews with faculty members. My plan was to develop the case studies individually and then draw some collective conclusions based on the analysis of the individual case studies. This is what Yin calls a “multi-site case study” (Yin, 2009). While reviewing the transcripts, however, it became apparent that there were patterns and contrasts in the responses, and I decided that my research questions would be better-served by what Stake describes as a “collective case study” (Stake, 1995). In much of the literature describing case study research methods, these two terms are considered synonymous (see, for example, Goddard, 2010). For my research design, the main distinction is the phase at which the data is integrated. Along these lines, Figure 6 illustrates the distinction between the original and revised study designs.



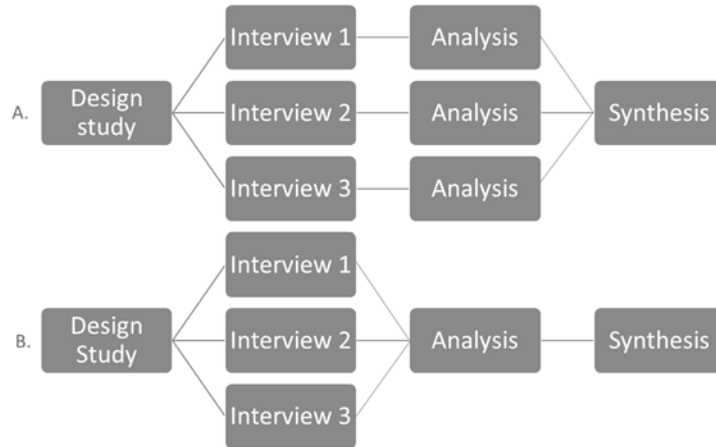


Figure 6. Original research design (a) and revised research design (b)

In committing to the new structure, I shifted the unit of analysis from the universities themselves to the perspectives of the university professionals on the benefits and barriers of partnerships.

### **Purposeful sampling.**

Given that there are over 20,000 universities in the world (Pérez, n.d.) and seemingly countless academic institutions are working with the UN in a variety of context, there are innumerable ways that I could have pursued this line of inquiry. In the interest of ensuring rich content within the scope of the dissertation topic and timeline, I opted to use purposeful sampling to develop case studies aimed at garnering insights about the experience of academics who work with the UN. Patton describes “purposeful sampling” as a means intentionally selecting cases that are “information rich” rather than constructing a broader, less targeted study that offers empirical generalization (Patton, 2002).

I chose public institutions because of the likely connections to government, and because research universities prioritize knowledge generation alongside dissemination,

this type of institution seems better-suited to support UN activities. Given the location of the United Nations in the United States, and the role that that nation plays as a major sources of UN funding, it seemed imperative to select one US institution. To enhance the study, I decided to include a non-US institution from a developed country and another from a developing country. Different countries, and even regions, have different attitudes and behavior when it comes to the United Nations, and it seemed appropriate to reflect perspectives from at least three regions. Since I narrowed the case study component of my research to just three universities, I decided that the interviewees must each demonstrate long-term experience working with the United Nations – ideally with multiple entities under that institutional umbrella. Based on these criteria and on personal opportunity, I interviewed Dr. Satishkumar Belliethathan from Addis Ababa University (AAU), Dr. Neil Burgess from the University of Copenhagen (UCPH), and Dr. Maria Ivanova from the University of Massachusetts Boston (UMB), each of whom has over seven years of experience working with the United Nations.

### **Data collection.**

Based on my literature review and the Landscape Review, I drafted a set of 14 questions to be used for my semi-structured interviews (see Appendix 1 for interview questions). I conducted interviews with one faculty member from each of the three selected institutions. The interviews varied in duration and detail, mainly based on the demeanor of the interviewee. Each interview started with discussion of the type of UN work the faculty member had been involved with, and the various UN groups they had ad experience with. Following that, overarching themes of the questions were:

- Benefits to universities

- Benefits to the UN
- Elements of and barriers to successful partnerships
- Forward-thinking insights
- Recommendations and lessons learned

### **Analysis.**

Once the interviews had been transcribed, I inserted the interview narrative from each respondent into a table and reviewed each to extract key concepts and themes. Where possible, I highlighted particularly compelling quotes from the respondents to emphasize the emerging narrative of the case study. This process flow is depicted in Figure 7.

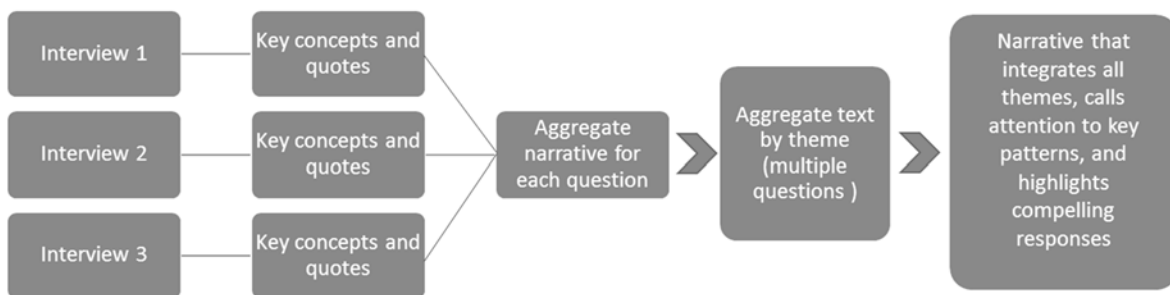


Figure 7. Analysis of interview text

As illustrated in Figure 8, for the final analysis, I revisited the literature review and batched the interview questions by the lines of inquiries that I am seeking to answer in the text. This then became the outline for Chapter 4.

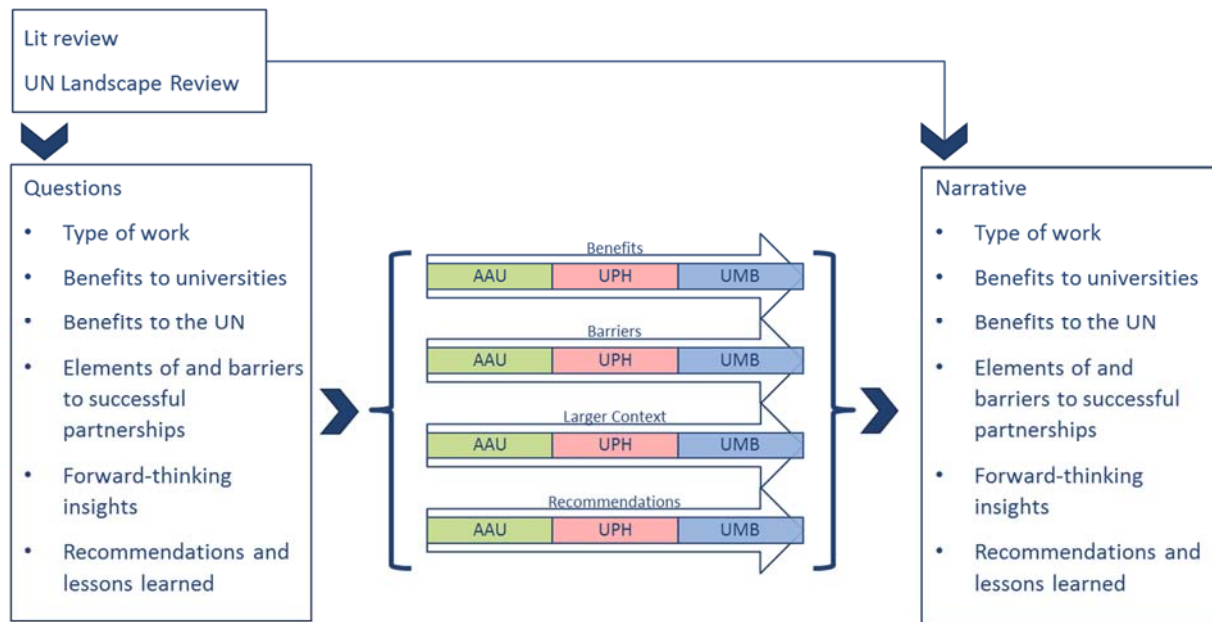


Figure 8. Case study process flow

## Integrated Results

Given the disparate nature of the data sets, it was not possible to use the results of the landscape review and the collective case study for an integrated analysis. However, because I used the same foundational literature review to inform both research processes, I was able to extract key conclusions as well as to identify some areas for future exploration. This is an example of what Patton calls “inductive analysis and creative synthesis” (Patton, 2002). Effectively, through both the landscape review and the collective case study I examined the results of or responses to specific questions side-by-side to identify patterns and contrasts and then looked for ways to synthesize (Patton, 2002). While there are many other ways to explore questions about partnerships between HEIs and UN entities, because of the consistent framework of the literature review, this dissertation and its mixed methods approach should prove to be a valuable contribution to that area of study.



### Chapter 3 : UN-based alliances with Universities

This dissertation is focused on the value of collaboration between UN entities and universities. This question can be examined in many ways, but at its core it must both reflect what opportunities UN entities are providing for higher education institution (HEI) participation and where the benefits and barriers are to these relationships. This chapter seeks to address the first of these elements.

As referenced in Chapter 2, I identified six UN agencies to research for this section. The criteria for selection were that the institution be mainly focused on sustainable development and that its website and/or gray materials offered current or recent evidence of mechanisms to foster collaboration with HEIs. The groups that met these criteria were:

1. United Nations Environment Programme (UNEP)
2. United Nations Human Settlements Programme (UN-HABITAT)
3. United Nations Institute for Training and Research (UNITAR)
4. United Nations Educational, Scientific and Cultural Organization (UNESCO)
5. United Nations Framework Convention on Climate Change (UNFCCC)
6. United Nations University (UNU)

The main content of this chapter is the findings of the landscape review. However, during the course of the research, I identified several additional organizations that offered notable qualities for my overarching line of inquiry, but did not qualify for the review:

- **United Nations Sustainable Development Solutions Network:** Launched in 2013, the United Nations Sustainable Development Solutions Network (UNSDSN) was designed to “mobilize scientific and technical expertise from academia, civil society, and the private sector in support of sustainable-development problem solving at

local, national, and global scales,” (Sustainable Development Solutions Network, 2012), and “accelerate joint learning and help to overcome the compartmentalization of technical and policy work by promoting integrated approaches to the interconnected economic, social, and environmental challenges confronting the world” (Sustainable Development Solutions Network, 2012).

UNSDSN is led by Columbia University in both New York and Paris, and while it is actively collaborating with the UN on developing the SDGs and advancing solutions to sustainability challenges, it is not technically a UN-based program and therefore does not qualify for this review.

- **Commission on Sustainable Development:** In 1992 the UN General Assembly established the Commission on Sustainable Development (CSD) within the UN Economic and Social Council (ECOSOC) as a mechanism to facilitate programming and partnerships in support of the outcomes of the United Nations Conference on Environment and Development (UNCED), or Earth Summit (United Nations General Assembly, 1993). One role the CSD played was to maintain a comprehensive database of partnerships (Andonova & Levy, 2003). It was an important driver behind the Higher Education Sustainability Initiative (HESI), which was a collaborative effort between UNESCO, UN-DESA, UNEP, the Global Compact, and UNU and had the highest number of signatories out of any of the voluntary commitments at the Rio+20 meeting (United Nations Department of Economic and Social Affairs, n.d.). Following the Rio+20 Conference, however, the CSD was replaced by a “universal, intergovernmental high-level political forum” (United Nations General Assembly, 2012). This has become UN Sustainable Development

Knowledge Platform, and is under United Nations Department of Economic and Social Affairs (UN DESA). While the new platform offers an array of outputs, other than housing the HESI it does not highlight engagement with HEIs. At the time that I conducted my research, the UN DESA website did not offer evidence of active programming or support for the HESI. It is worth noting that in the summer of 2015, UN-DESA announced a new set of events related to the HESI, but that call for engagement occurred after this research was complete (United Nations Department of Economic and Social Affairs, n.d.).

- **United Nations Department of Economic and Social Affairs:** Reporting to the Secretary-General, according to the UN DESA website, it “works closely with governments and stakeholders to help countries around the world meet their economic, social and environmental goals.” (UN Department of Economic and Social Affairs, 2013), As an entity, it is highly focused on research, analysis, and fostering collaboration on shared development priorities, including sustainability. It does not, however, offer any mechanisms for direct engagement with higher education. As mentioned in Chapter 1, UN DESA is responsible for defining and engaging the “Major Groups” that the UN recognizes as key stakeholders. Beyond the fact that DESA does not offer programming for HEIs, that there is no Major Group where they might be naturally included in dialogues and programming indicates a disconnect between their focus on research and outreach and the role that HEIs might play.

## **UN Organizations**

Each of the following sections begins with the mission statement of the UN organization. In cases where I could not find a mission statement, I use substitute text from the entity’s



website. The mission statement is followed by narrative passages on HEI-specific programs offered by the UN entities. Where there is more than one program for review, the section leads with those lines of inquiry that can be referenced in the aggregate and then offers program-specific insights for those that cannot. This chapter concludes with a distillation of the results across the six UN groups and key conclusions.

It is important to note that my landscape review was based solely on websites and gray literature available online. While interviews or surveys with the program secretariats would have netted more information, part of the value of this exercise is to demonstrate what is publicly available to possible partners.

### **United Nations Environment Programme (UNEP).**

***Mission.*** “To provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations” (UNEP, n.d.).

UNEP’s work reflects seven cross-cutting thematic priorities:

- **Climate Change:** Strengthen the ability of countries, in particular developing countries, to integrate climate change responses into national development processes.
- **Disasters and Conflicts:** Minimize threats to human well-being from the environmental causes and consequences of existing and potential natural and man-made disasters.
- **Ecosystem Management:** Ensure that countries use the ecosystem approach: the holistic management of land, water and living resources to promote conservation and sustainable use to enhance human well-being.

- **Environmental Governance:** Ensure that environmental governance and interactions at the country, regional and global levels are strengthened to address environmental priorities.
- **Harmful Substances:** Minimize the impact of harmful substances and hazardous waste on the environment and people.
- **Resource Efficiency:** Fostering sustainable consumption and production by leading global efforts to ensure natural resources are produced, processed and consumed in a more sustainable way.
- **Environment Under Review:** Providing open web platforms, services and access to timely, substantiated knowledge about the environment and emerging issues to allow for informed decision-making (UNEP, n.d.-a).

Under the umbrella of its Environmental Education and Training program UNEP has created three major initiatives for engaging universities: Mainstreaming Environment and Sustainability in Africa Universities Partnership (MESA), Global Universities Partnership on Environment and Sustainability (GUPES), and UNEP-Tongji Institute of Environment for Sustainable Development (IESD). Each of these has clear language about the relationship of the program to UNEP's mission and seven thematic priorities. How well each of these initiatives reflects the other guiding questions for this study varies, however, so each is reviewed separately here.

**Mainstreaming Environment and Sustainability in Africa** (MESA) is designed to enhance sustainable development teaching and research in African universities. It also emphasizes the greening of university operations, community building, and empowering students while they are on campus and as they become professionals. At the time of this

writing, UNEP's website states that MESA participants number 85 universities in 30 countries. This program is mainly a Knowledge Transfer Platform, but it also offers curriculum support which is a form of Capacity Building. In this case, the flow of resources is mono-directional, but because UNEP's mission statement includes partnership and enabling nations and people to act as stewards, there is non-resource reciprocity. The United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations University (UNU), and the Association of African Universities are all active partners in this program. Perhaps the most notable deliverable referenced on the MESA website is the Education for Sustainable Development Innovations Course Toolkit (UNEP, 2006), but while that is a comprehensive resource, it pre-dates several significant global milestones for sustainability, including the end of the Kyoto Protocol and the Rio+20 conference. The other deliverables listed on the MESA website include a set of meeting reports and a handful of less measurable outcomes such as "strengthened the voice of African students in ESD decision-making" (UNEP, n.d.-b). While the UNEP website still presents MESA as an active program, it is possible this program has been eclipsed by GUPES, which was launched in 2012 to build on the MESA model of collaboration between UNEP and universities. Overall, the MESA materials on the UNEP website do not seem current, and therefore may be of limited value to existing partners and possibly unattractive to new participants.

Launched in June 2012, at the time of this writing the **Global Universities Partnership on Environment and Sustainability** had nearly 500 institutional members from around the globe (Pradhan & Mariam, 2014). Like MESA, GUPES focuses on "teaching, research, teaching, research, community engagement, the management of universities

including greening of university infrastructure /facilities /operations” (UNEP Environmental Education and Training Unit, 2012) as well as student empowerment.

While GUPES was based on the MESA model, its website and other materials emphasize knowledge exchange and networking rather than mono-directional knowledge transfer. The main deliverables are teaching, training, and MOOCs aimed at capacity building, but there is also strong emphasis on the transformative role that universities can play, and it is clear that GUPES is designed to foster capacity building through networking. Based on these elements, GUPES could be categorized as meeting all four of the partnership types defined for this chapter. Like MESA, the reciprocal value of this program to UNEP appears to be that it is a mechanism for fulfilling the organization’s mandate for capacity building. The language of the GUPES materials also clearly reflects more recent global dialogues than MESA. For example, the program directly references Green Economy, which became part of the global lexicon during Rio+20.

Exploration of the GUPES website and reports reveals that while its design is mainly based on MESA, it also built on two purportedly similar UNEP initiatives – the Regional University Consortium (RUC) in Asia and the Mainstreaming Environment and Sustainability in the Caribbean Universities (MESCA) in Latin America. While additional online information about these two consortia is sparse, GUPES membership from these regions is quite robust. As shown in Figure 9, 79% of the 496 GUPES member universities are located in the regions where UNEP had formed university networks.

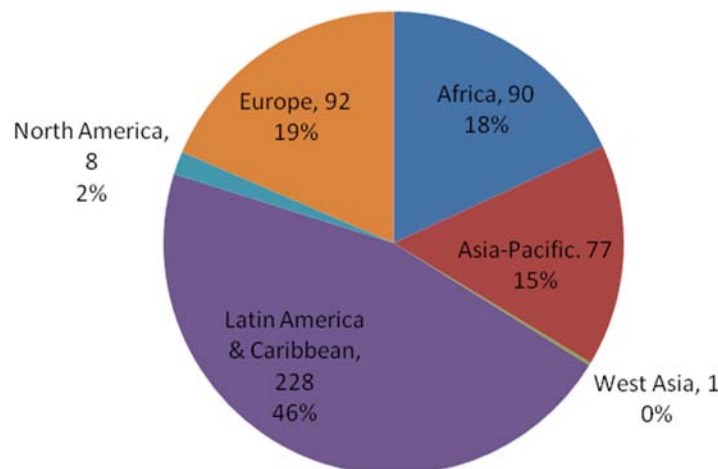


Figure 9: GUPES Membership by region as of September 2014 (UNEP, n.d.-b)

Latin America's disproportionately high percentage may be related to a launch event that UNEP hosted with the Alliance of Latin American Universities Network for Sustainability and the Environment (ARIUSA), the Environment Training Network (ETN), and the UNEP Regional Office for Latin America and the Caribbean (UNEP Environmental Education and Training Unit, 2013). Unfortunately, West Asia only boasts one member and North America just eight. On one hand, the latter number is perplexing because the United States has maintained a leadership role in university sustainability, which is a notable exception to its typical engagement in global sustainability priorities (Tilbury, 2012). On the other hand, this may also reflect both UNEP's historic focus on developing countries as well as the general disconnect between US institutions and UN agencies, which may be influenced by US political relations with the UN (Schwartzberg, 2013).

The two regional anomalies aside, GUPES membership seems to be robust in areas where UNEP has already been collaborating with universities and where accessibility may be consistent with concerted regional efforts. The program website makes it clear that it is

open and accessible to new participants, though, and GUPES seems to enjoy strong institutional support at UNEP. While sections of the website appear dated and the repository of resources is not comprehensive, there is fresh content and it is clear that there are annual meetings and plans for on-going and enhanced deliverables such as MOOCs for students at all levels.

As for engaging additional stakeholders as partners, while the GUPES websites and brochures contain several references to additional partners and engaging the private sector and NGOs, the nature of these collaborations is unclear from the literature. The most substantive reference I could identify was that the 2012 launch event included representatives from the International Association of Universities, the Asian Development Bank, the Global University Network for Innovation (GUNI) at the Technical University of Catalonia , and the Institute for Advanced Sustainability Studies as well as UNESCO and UNU (UNEP Environmental Education and Training Unit, 2012).

The literature about MESA and GUPES leaves unclear some questions related to timelines. MESA was launched in support of Millennium Development Goals (MDGs) and GUPES in support of the Decade of Education for Sustainable Development (ESD). The MDGs will expire in 2015 and the Decade of Education for Sustainable Development concluded in 2014. This emphasis on global priorities was likely critical in establishing the rationale for engaging universities and setting the agendas for these initiatives. Fresh visionary language to connect each of these programs to current and emerging geopolitical happenings might enhance their attractiveness to current and prospective members.

Another program housed under UNEP is the **UNEP-Tongji Institute of Environment for Sustainable Development (IESD)**. The vision statement on the IESD website offers four priorities:

Guided by the “Higher Education Sustainability Initiative” and supported by “Global Universities Partnership on Environment and Sustainability”, IESD will mainstream environment and sustainable development into higher education, promote education reform in sustainable development, and facilitate the reform of higher education system by incorporating the concepts and practices of environment and sustainable development.

- To build IESD into a “think tank” of UNEP by conducting researches on climate change, disasters and conflicts, ecosystem management, environment governance, harmful substances, resource efficiency and environmental conditions assessment, and facilitating the technology transfers to developing countries as part of South-South cooperation.
- To participate in regional or global environmental projects and capacity building programs organized and coordinated by UNEP.
- To establish an internationalized educational institution in respect of environment and sustainable development, with the support of UNEP and cooperation with international leading universities for the purposes of educating technical and management personnel, particularly for developing countries.
- To promote environmental academic communication, hold international conferences and to establish an international research,

education, and information communication center of environment and sustainable development. (UNEP-Tongji Institute of Environment for Sustainable Development, n.d.).

Established in 2002, the IESD outreach materials reflect its maturity as well as its focus on attracting excellent students, faculty, and partners. In addition to environmental education and regional and global capacity building programs, IESD seems to have a strong focus on leveraging university expertise in developing knowledge to support global sustainability priorities. It is also committed to becoming a leader for educational excellence as well as a facilitating agent for academic communication and collaboration. The reciprocal value to UNEP of this alliance with Tongji is evident in both the Institute's governance and programming. UNEP experts are seem to be actively involved with the curriculum as well as the management of this program. IESD is also playing a strong supporting role for GUPES and for regional initiatives, which has the added benefits of both enriching UNEP's suite of programs in this arena and bolstering the value of the IESD offerings.

Most of the IESD website makes it seem like it is a bilateral partnership between UNEP and Tongji University, but one page of the site lists additional allies including several universities in the US and Europe, several Chinese ministries, regional and international research centers, other UN programs, and even one corporation. So while it is apparent that this is a dynamic and inclusive program, it is unclear is how other groups or interested universities might become involved (UNEP IESD, n.d.).

IESD offers a remarkable set of deliverables, including multiple degree-granting programs, training initiatives, events, research, and reports. In this regard, this program embodies all of the unique attributes that universities have to offer UN initiatives that are



listed in Chapter 1. The direct involvement of the Chinese ministries offers remarkable additional programmatic richness. Based on all of the attributes highlighted here, IESD also qualifies for all of the partnership types specified for this chapter.

**United Nations Human Settlements Programme (UN-Habitat).**

***Mission:*** “to promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all” (United Nations Human Settlements Programme, n.d.-d).

According to UN-Habitat, 60 percent of the global population will live in urban areas by 2030, with most of the projected growth happening in Africa, Asia, Latin America, and the Caribbean (United Nations Human Settlements Programme, n.d.-d). Rapid urban growth in the absence of planning for the associated increases in environmental and social impacts pressures has the potential for serious ecological, financial, and human consequences.

Launched in 1975, the United Nations Habitat and Human Settlements Foundation was originally a UNEP initiative designed to offer capital and technical assistance to national governments to assist with issues related to human settlements (United Nations Human Settlements Programme, n.d.-c). As the trends, risks, and consequences of urbanization became increasingly apparent, the program evolved and grew to become a full-fledged UN Programme, and is known as UN-Habitat, the United Nations Human Settlements Programme (United Nations Human Settlements Programme, n.d.-c). UN-Habitat’s work is organized into seven thematic hubs:

- Urban legislation, land, and governance,
- Urban planning and design,

- Urban economy,
- Urban basic services,
- Housing and slum upgrading,
- Risk reduction and rehabilitation, and
- Research and capacity development (United Nations Human Settlements Programme, n.d.-a).

Habitat UNI is UN-Habitat's primary mechanism for engaging HEIs. UNI is designed to facilitate collaboration between Habitat and HEIs, between HEIs around the world, and between HEIs and municipalities. The UNI program descriptions emphasize the value of connecting research to application and offering tomorrow's leaders hands-on experiences. The two most conspicuous outputs of UNI are the Global Urban Lectures, which is a series of free online videos on critical urban challenges, and the Thematic Hubs, which are consortia of universities that convene for the purpose of working on specific challenges such as food security, urban governance, and climate change (United Nations Human Settlements Programme, n.d.-b). Habitat partners with a broad range of NGOs and think tanks, and these are engaged in programming for UNI – most evidently in the delivery of the Global Urban Lectures.

The Thematic Hubs are charged with forwarding “research and action on the thematic target, promoting education, policy advice and professional development ...and which have a strong focus on translating into direct impacts on the city level,” (United Nations Human Settlements Programme, n.d.-e), which is a clear indication that the UNI is designed to offer applied teaching and research opportunities to university stakeholders, and that there are tangible outcomes to the program.

The charter, aim, vision, objectives, principles, and operationalization of the program are clearly spelled out in a readily accessible document (United Nations Human Settlements Programme, 2011) and interested individuals and institutions may join by completing readily visible online forms. At the time of this writing, the website references over 150 institutional partners and over 1,200 individual members. It also offers an online repository and forum for discussion, though that resource does not appear well-used.

The Habitat UNI website is clearly-structured and contains robust information about the initiatives overviewed above as well as a handful of events, news items, and reports. However, much of it is dated. It is apparent that several sections have not been updated for nearly two years, which implies that there may be a gap in communication or that accountability for outputs may be lax, but there are fresh and relevant materials – such as topic-specific lectures by researchers from around the world – that offer evidence of Habitat UNI being a viable partnership platform for Knowledge Transfer and Capacity Building.

### **United Nations Institute for Training and Research (UNITAR).**

***Mission.*** “To develop capacities to enhance global decision-making and to support country-level action for shaping a better future” (United Nations Institute for Training and Research, 2014).

Created in 1963 by UN General Assembly Resolution, UNITAR was originally designed to build diplomatic capacity in new members to the United Nations. Today it is the training arm of the UN. UNITAR’s primary target audiences are individuals who contribute to the development of intergovernmental agreements, including diplomats to

the UN, as well as individuals working on national-scale policy implementation (United Nations Institute for Training and Research, n.d.-b).

UNITAR has active one-on-one relationships with several universities, including Columbia, New York University, and Yale. These mainly take the form of fellowships for New York-based diplomats. Of the three, only the Yale program is focused on sustainability, as it is a direct alliance with the Yale School of Forestry & Environmental Studies. That program is still listed on the UNITAR website, but it appears that it has not been active since 2011 (United Nations Institute for Training and Research, n.d.-c). UNITAR has maintained active relations with the Yale School of Forestry & Environmental Studies, however, through the UNITAR-Yale Environment & Democracy Initiative. This program is mainly comprised of a series of workshops and conferences designed to convene academics and policymakers to discuss critical issues such as climate change governance and democracy and environmental governance. These events, which take place at intermittent intervals, offer the opportunity for practitioners and policymakers to interact in the neutral forum provided by the university. The calls for abstracts are open to civil society as well as UN groups, so this is a fairly inclusive partnership. Each of these events is a milestone unto itself, but each also yields multiple publications and reports. In addition, the events are structured to address key current topics in global environmental governance, so the connections to overarching sustainable development priorities is evident. Since these events include a blend of scholars and practitioners, it does seem as though the events and their outcome documents actively contribute to the policy dialogues surrounding key governance issues, and the events may offer legitimacy to certain research, as well as the

opportunity for networking. Based on these qualities the main partnership types that describe this relationship are Knowledge Transfer and Participation.

That said, this particular alliance appears to be ad hoc. The website for that partnership lists events and outputs from 2008 through 2010, but there was an additional conference in 2014 called Human Rights, Environmental Sustainability, Post-2015 Development, and the Future Climate Regime (United Nations Institute for Training and Research, n.d.-a). Thus, while this partnership clearly embraces the desirable qualities of a UN-HEI partnership and is inclusive, it lacks clear guidelines and strategy.

### **United Nations Educational, Scientific and Cultural Organization (UNESCO).**

***Mission.*** “To contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information” (United Nations Educational, Scientific and Cultural Organization, n.d.-a).

UNESCO lists Africa and gender equity as its top global priorities, but also sites a set of overarching objectives:

- Attaining quality education for all and lifelong learning
- Mobilizing science knowledge and policy for sustainable development
- Addressing emerging social and ethical challenges
- Fostering cultural diversity, intercultural dialogue and a culture of peace
- Building inclusive knowledge societies through information and communication

(United Nations Educational, Scientific and Cultural Organization, n.d.-a)

These goals elucidate nicely the connections between UNESCO and both sustainable development and educational institutions. UNESCO has three major initiatives for engaging

HEI partners: the UN Decade of Education for Sustainable Development, the University Twinning and Networking Scheme (UNITWIN), and the University-Industry-Science Partnership Programme.

According to its website, UNESCO is “the only United Nations agency with a mandate in higher education” (United Nations Educational, Scientific and Cultural Organization, n.d.-b). It lists four principle ways that it supports the establishment of sustainable higher education systems:

- building and strengthening capacities at the national level;
- providing global leadership concerning teacher training and related policy issues;
- developing policy options for an educational response to the challenges of globalization through research and knowledge-sharing; and
- assisting Member States in planning for and developing sustainable policies in the use of Information and Communication Technology in education in a lifelong learning perspective (United Nations Educational, Scientific and Cultural Organization, n.d.-b).

These clearly-defined mechanisms demonstrate that UNESCO recognizes the potential of HEIs to inform advanced solutions to national-scale challenges. Thus, not only does each of the HEI partnerships housed in UNESCO correlate to that agency’s mission and priorities, it is clear that UNESCO has been committed to engaging HEIs and fostering collaboration with additional stakeholders. However, review of its existing programs calls into doubt whether the agency has allotted sufficient resources for this work.

UNESCO was the lead organization for the **UN Decade of Education for Sustainable Development** (ESD), which began in 2005. While the ESD is now technically

complete, the UNESCO website has become a clearinghouse of related outputs, including news, reports, and other resources on biodiversity, climate change, disaster risk reduction, cultural diversity, poverty reduction, gender equality, health promotion, sustainable lifestyles, peace and human security, water, and sustainable urbanism. Partners to this initiative include educators, youth, faith-based groups, civil society, the private sector, and 22 UN entities (United Nations Educational, Scientific and Cultural Organization, n.d.-c). Based on the success stories and other resources on the UNESCO websites, the ESD was able to engage, empower, and connect stakeholders. This begs the question of “now what?” since that program has now concluded. In terms of the framework for this study, it is fair to say that ESD is now a Knowledge Transfer Platform for a variety of stakeholders and is no longer open to new members.

Established in 1992, the **UNITWIN/UNESCO Chairs Programme** was designed to foster collaboration, knowledge transfer, and capacity building between universities and research institutions as well as among network groups (United Nations Educational, Scientific and Cultural Organization, n.d.-d). UNITWIN appears to have robust value-added to all participants: its model is to establish university “chairs” and networks to act as think tanks on critical issues and then establish connections between theory and practice by cultivating relationships with civil society, the public sector, local communities, and decision-makers. It actively advances “pooling” for both human and resources and both North-South and South-South collaboration. There are quite a few tangible deliverables on the UNITWIN website, including reports, instructions on becoming a chair or a network, and blank forms for reporting. However, many of the resources housed on the UNITWIN section of the UNESCO website are dated or contradictory. For example, one page of the

website says there are over 650 institutions in 124 countries (United Nations Educational, Scientific and Cultural Organization, n.d.-d) and another lists over 850 institutions in 134 countries (United Nations Educational, Scientific and Cultural Organization, n.d.-f). This may lead to confusion among prospective partners. The contradiction of the robust programmatic language and the poorly maintained website seems mainly to be an issue of not prioritizing program communications. Those HEIs who become involved likely benefit from the collaborative nature of this program. This combined with the online outputs indicate that UNITWIN partnership can be categorized as Participation and Knowledge Transfer.

Launched in 1993, UNESCO's **University-Industry-Science Partnership (UNISPAR)** program was created to bolster the capacity of universities in developing countries and to enable relationships between industry and HEIs. During the 1990s, the program maintained a fairly robust portfolio of alliances in Arab States, the Asia-Pacific region, Latin America, Europe, and Africa. This initiative was pared down in 2002, however, and is now limited to three projects:

- Boosting innovation and entrepreneurship in Burkina Faso, Niger and Senegal
- Creating innovation hubs at Arab universities
- Science and technology park governance (United Nations Educational, Scientific and Cultural Organization, n.d.-e)

Unfortunately, the links from the UNISPAR page are broken. While this program may have historically supported the agency's mission and offered value-added to UNESCO, HEIs, and industry, its current value is limited and it seems that UNESCO is not currently positioned



to take on new participants. Based on the current limitations of this initiative, the partnership should probably only be considered a Knowledge Transfer mechanism.

### **United Nations Framework Convention on Climate Change (UNFCCC).**

**Purpose.** “The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases” (The United Nations Framework Convention on Climate Change, n.d.).

Previous reviews of the UNFCCC website revealed several mechanisms for engaging universities – mainly in the form of partnering with regional networks such as the Asian University Network of Environment and Disaster Risk Management and the Africa Adapt Knowledge Sharing Platform. The UNFCCC website seems to have undergone a transformation associated with COP21, however, and these programs are no longer evident. Nor are any other official mechanisms for university participation in the process. In fact, the “parties and observers” section of the UNFCCC site offers links for States, Intergovernmental Organizations, Civil Society, and the Roster of Experts, which means that there may be no natural place for academics who have not been enlisted as experts.

That said, I have opted to include UNFCCC in this review because it is an undeniably critical UN agency that is, in fact, engaging with members of academia in devising solutions. This is evidenced by the Roster of Experts, which contains roughly 1,500 individuals from all participating states, is peppered with representatives from academia. Thus, while UNFCCC does not have a formalized program to foster HEI collaboration, there are means for faculty to participate and there is reciprocal value-added to the relationships, which are

intrinsically multi-stakeholder in nature. In this case, the notable milestones would be the COPs and interim meetings and the major deliverable would be an analytically robust climate accord for COP21. Based on the expertise-centric nature of this work, in addition to qualifying this as a Participation partnership, I also designate it as Capacity Building. I will also add that in removing what was likely outdated language about academic partnerships from its website, UNFCCC sets a good example for its sister UN entities.

### **United Nations University (UNU).**

**Purpose.** “to contribute, through collaborative research and education, to efforts to resolve the pressing global problems of human survival, development and welfare that are the concern of the United Nations, its Peoples and Member States” (United Nations University, n.d.-b).

Launched in 1973, UNU was specifically designed to connect academia with UN organizations. Its Rector holds the title of UN Under-Secretary-General, and as an institution it maintains active and fruitful relationships with a spate of other UN groups. Its work is organized into five “thematic clusters:”

- Peace, Security and Human Rights
- Development Governance
- Population and Health
- Global Change and Sustainable Development
- Science, Technology and Society (United Nations University, n.d.-e)

The governance of UNU is supported by a 13-member Council that develops the university’s policies and oversees its budgets and work programs (United Nations University, n.d.-h). The UNU Centre in Tokyo houses the rector and coordinates the

university's financial and academic planning (United Nations University, n.d.-g). It maintains additional coordinating offices in Bonn, New York, Paris, and Kuala Lumpur. Scholarly work is mainly channeled through UNU's 13 research institutes, which are housed in universities around the world:

- Institute on Comparative Regional Integration Studies (UNU-CRIS), *Bruges, Belgium*
- Computing and Society (UNU-CS), *Macao, SAR, China*
- Institute for Environment and Human Security (UNU-EHS), *Bonn, Germany*
- Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES), *Dresden, Germany*
- Institute on Globalization, Culture and Mobility (UNU-GCM), *Barcelona, Spain*
- Institute for the Advanced Study of Sustainability (UNU-IAS), *Tokyo, Japan*
- International Institute for Global Health (UNU-IIGH), *Kuala Lumpur, Malaysia*
- Institute for Natural Resources in Africa (UNU-INRA), *Accra, Ghana*
- Institute for Water, Environment and Health (UNU-INWEH), *Hamilton, Ontario, Canada*
- Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT), *Maastricht, The Netherlands*
- World Institute for Development Economics Research (UNU-WIDER), *Helsinki, Finland*
- Programme for Biotechnology in Latin America and the Caribbean (UNU-BIOLAC), *Caracas, Venezuela*
- Iceland-based Programme (UNU-FTP, UNU-GEST, UNU-GTP & UNU-LRT), *Reykjavík, Iceland* (United Nations University, n.d.-i)

These institutes vary in age, structure, and foci. One example is the Institute for Natural Resources in Africa, which was established at the University of Ghana in 1985 with the dual purposes of enhancing higher education in Africa and protecting that region's natural resources. It fosters partnerships between HEIs and UN agencies within the context of its five operating units, each of which is housed in an HEI in a different African nation (United Nations University, n.d.-a). Another example is the United Nations University Institute for Water, Environment and Health. Housed in McMaster University in Ontario, Canada, this Institute has two major foci for all research, and additionally invests its resources in training and resource portals. It maintains a comprehensive network of research organizations around the world. As of this writing, there are 47 spread throughout Asia, Africa, and Latin America (United Nations University, n.d.-f). It also maintains research partnerships with roughly the same number of organizations, as well as 12 UN agencies and programs and 14 partnerships aimed at shared academic outputs (United Nations University, n.d.-f). These institutes clearly offer value to UNU as well as to the host institutions, as well as other UN entities. Each one is carefully designed to engage additional allies as fits the programming of the Institute.

In addition to the 13 UNU Institutes, UNU maintains a network of 13 “associated institutions” that meet the qualifications set forth in the UNU statutes:

1. be established on the grounds of academic excellence and be based on the contributions the University and the institution can jointly make in dealing with the pressing global problems of human survival, development and welfare
2. seek to enhance the capabilities of associated institutions and the University, particularly in developing countries

3. where mutually appropriate, establish or form part of a network of other institutions and scholars
4. not result in an undue financial burden on the University (United Nations University, n.d.-c).

It is clear that these relationships are firmly grounded in the principles set forth in the WSSD partnership definitions. As shown in Figure 10 and Figure 11, there is some disparity in geographic distribution of the UNU Institutes as well as the affiliated institutions. However, as is the case with the Institute for Water, Environment and Health, the Institutes tend to engage broad ranges of allies and stakeholders.

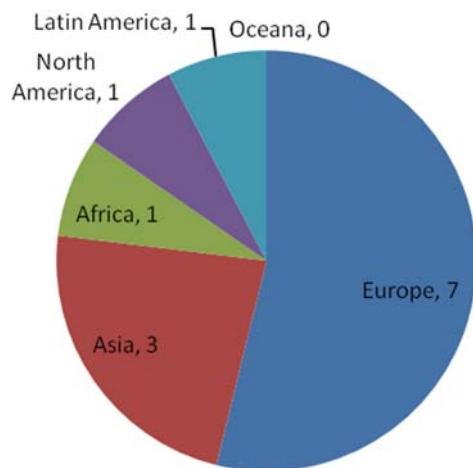


Figure 10. Geographic distribution of UNU research institutes

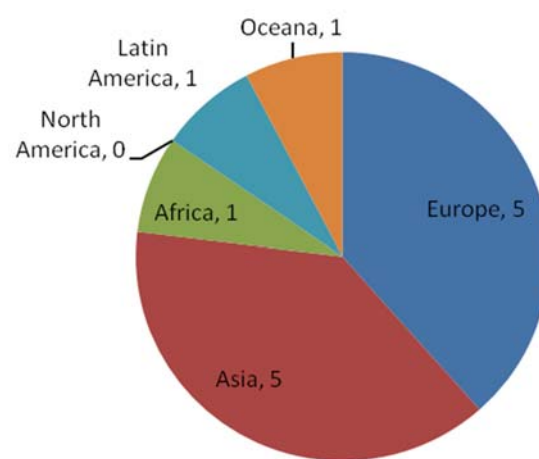


Figure 11. Geographic distribution of UNU associated institutions

In 2014, UNU formed the Centre for Policy Research, which is intended to facilitate policy research on two major areas of priority for the United Nations: peace and security and sustainable development (United Nations University, n.d.-d). Housed in the secretariat, this Centre coordinates between the UNU New York Office and the affiliated research institutes. In addition to assisting with connecting the work of the institutes directly to current global

policy challenges, the Centre for Policy Research is tasked with identifying academic experts to assist with global policymaking.

Given the scope and diversity of its programming, UNU meets the criteria for all of the partnership categories defined in my research for this dissertation. It is clear that UNU is the premier mechanism for universities to engage with UN agencies. In providing access to the UN system and the university's various networks of stakeholders and allies, the value-added seems evident. The list of participants is extensive and diverse, as is the catalogue of deliverables. Given the governance structure and robust nature of the partnerships, it also seems apparent that there is a fair degree of accountability. Of the core questions I am seeking to address in this dissertation, the only one that is unclear for UNU is how new institutions might join. While there are comprehensive resources for interested prospective students and fellows, it seems selection of institutional partners may be at the discretion of UNU.

### **UN-HEI Collaboration: Current UN Programs**

As referenced in the Partnerships section of Chapter 1, multi-stakeholder partnerships are frequently aimed at closing governance gaps for regulation, participation, and implementation. In addition, partnerships that have evidenced success have shown a small set of desirable qualities:

- knowledge distribution for developing tailored solutions to complex issues;
- mechanisms to include participation from a variety of experts;
- collaboration on special or niche topics that require adaptive capacity.

As shown in Figure 1, most of the UN entities included in this landscape review reflect these qualities in some way. Most also offer opportunities for participation, some

provide opportunities for implementation, and one or two may even have offer chances to collaborate on regulation. The preponderance of outdated materials and broken links throughout the UN websites may be indicative of these programs being low priority areas, however, and that programs that were launched with good intentions and robust frameworks may now be neglected. As stated in Chapter 1, Binkerhoff provides a simple causal chain framework for the contribution of partnerships for good governance – structure, process, outcomes – where she emphasizes that each of these components must be robust in order for partnerships to be effective (Binkerhoff, 2008). She also points out that stakeholders must be assured from the outset of the value of the partnership and have a strong sense of shared power and distribution of power (Binkerhoff, 2008). These critical elements seem to be missing many of the current UN programs.

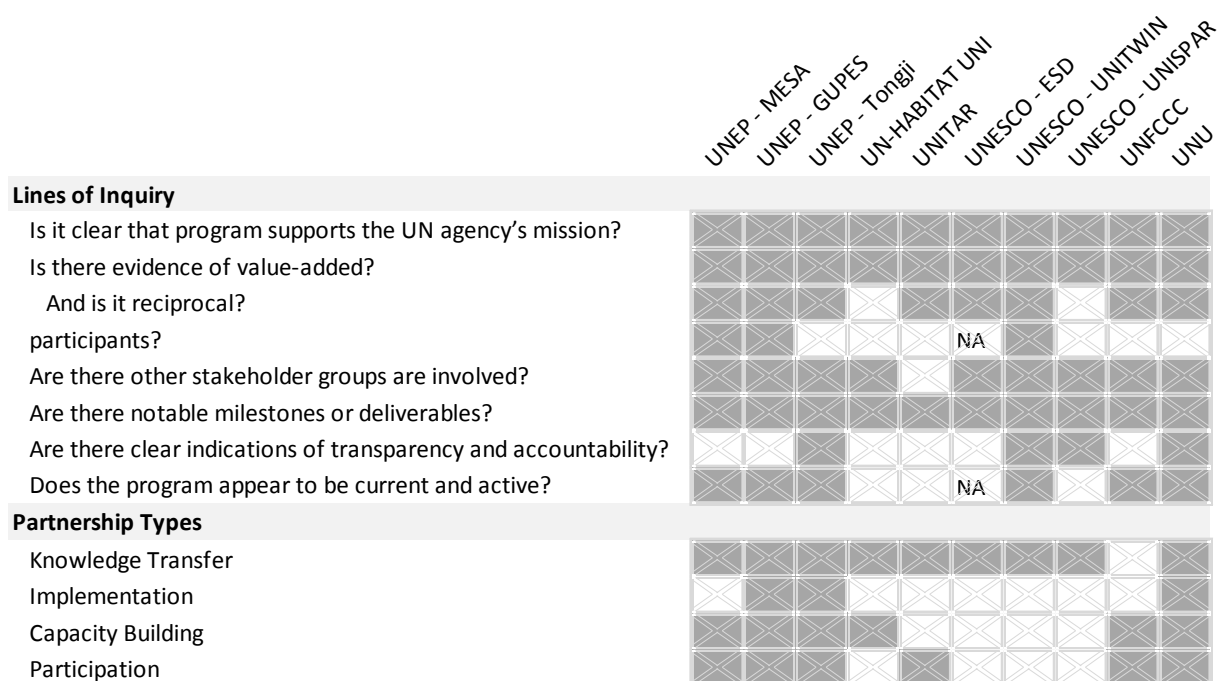


Figure 12. Key results from landscape review of UN entities  
(Gray boxes indicate affirmative results)

Based on their websites, IESD and UNU are taking full advantage of the assets that universities have to offer. Each of these groups seems to make an asserted effort to provide robust programming, include extensive partners, and support it all with good communications. On the one hand, given the academic nature of these particular groups, it is logical that they would be well-suited to foster relationships with university partners. However, it does appear that the other groups included in the landscape review have good intentions for engaging the academic community in developing applied solutions. As shown in Figure 12, of the 10 programs included in the landscape review, 9 qualify as Knowledge Transfer, six for Capacity Building, six for Participation, and three for Implementation. Given the knowledge focus on HEIs, it makes sense that this is a key focus for these relationships. Many of the HEI assets overviewed in Chapter 1 lend themselves well to capacity building, so this is likely an attractive point of collaboration and one that could be expanded upon by several of the programs. Participation is one area where faculty expertise should be valued – as part of the COP processes, for example. While six out of 10 is a strong showing in that area, it could be advantageous to enhance this element of these partnerships. As indicated by just three of the programs qualifying for this descriptor, there is not much happening with implementation now, but this should be considered an area of opportunity.

Perhaps the most important conclusion to draw from this exercise, therefore, is that if UN groups are truly interested in capturing the value of HEI participation, additional resources must be dedicated toward maintaining current and attractive opportunities, outputs, and networks.



## **Chapter 4 : University Perspectives on UN-HEI Alliances**

This chapter offers perspectives from higher education on the value of collaborating with UN agencies. As referenced in Chapter 2, the three institutions I selected for this line of inquiry were Addis Ababa University (AAU) in Ethiopia, the University of Copenhagen (UCPH) in Denmark, and the University of Massachusetts Boston (UMB) in the United States. The chapter starts with a brief set of comparative insights for the countries that host the three universities. It then offers some basic information about each of the universities and the individuals I interviewed. The synthesis of the interviews is then explored in four sections: benefits to universities, benefits to the UN, key elements and barriers to successful collaboration, and recommendations from the faculty interviewees.

### **Global Context for the Selected Universities**

As discussed in Chapter 1, the three basic dimensions of sustainability are people, planet, and prosperity, and culture, resilience, and technology are critical concepts for integrated governance. While this chapter mainly synthesizes and summarizes the perspectives of Satishkumar Belliethathan from AAU, Neil Burgess UCPH, and Maria Ivanova from the University of Massachusetts Boston UMB, it is important to set the stage for this narrative in the global context. To do this, I include here a brief set of economic, social, and environmental indicators. Figure 13 shows where Ethiopia, Denmark, and the United States rank on three international scales. I include Purchasing Power Parity (PPP) to indicate financial robustness, the Happy Planet Index (HPI) as a measure of social well-being, and the Environmental Performance Index (EPI) to show environmental vitality. There is some overlap among these – HPI includes environmental indicators and EPI some social – but these aggregate numbers offer some insights and some basis for comparison.

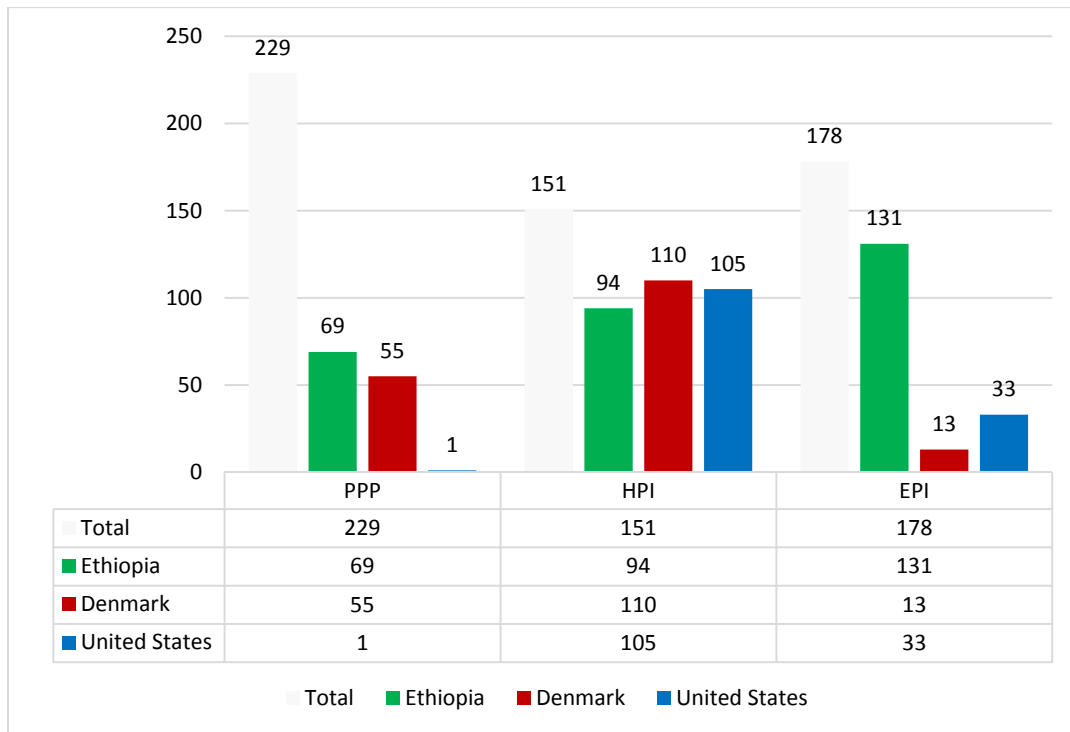


Figure 13. PPP (Central Intelligence Agency, 2014), HPI (Abdallah, Michaelson, Shah, Stoll, & Marks, 2012), and EPI (Hsu et al., 2014) rankings for Ethiopia, Denmark, and United States

Another indicator of note is the relative contributions of each of these countries to the United Nations. Funding of the United Nations is done both through mandatory assessments and voluntary contributions. The assessments, which provide funding for the central UN budget, peacekeeping, and a set of specialized agencies, are based roughly on gross national income, so there is something of a correlation between the PPP rankings and UN assessments. However while PPP rankings are relative, the assessments are based on absolute financial indicators. In other words, the UN budget allocations are more likely to elucidate the disparity between income levels because its fees are apportioned based on estimated wealth (United Nations General Assembly, 2009). Based on this, the United States contributes the largest portion of the UN budget at 22% (United Nations Secretariat, 2014). At .675%, Denmark is the 24th highest contributor (United Nations Secretariat,

2014) and Ethiopia provides roughly .01%, which places it near the bottom of the third quintile of UN financial supporters (United Nations Secretariat, 2014).

Interestingly, more than half of the funding for the United Nations comes from voluntary contributions. In 2009, for example, the total budget for the UN system was US\$31,648M and of that US\$11,868M came from assessments and US\$19,780M from voluntary contributions (Hüfner & Renner, 2014). Specific data about country-level support for each specialized agency is difficult to attain so I am not able to include here the relative distribution of funds. However, this element of UN financing is significant because it means that many of the UN agencies are vulnerable to shifts in nation state priorities, such as those that occur following political elections or economic challenges. It can also effectively create competition among UN groups as well as between UN agencies and other possible funding recipients.

## **University Overviews**

The following three sections offer information specific to each university and interviewee. To offer context, each one includes the mission of the institution and some basic demographic information (Note: personnel data included are “fulltime equivalent.” This means that part-time students and employees will be aggregated into fulltime numbers, so the actual numbers of people may be above what is cited here.) This is followed by a brief description of the interviewee and then a short narrative about the ways in which the interviewee and the institution participate in UN-related work. To be clear, the information included in these sections is based on the interviews, so it may not be comprehensive for each institution. Each one offers rich and diverse examples of collaboration, however.

## **Addis Ababa University.**

### ***Basic facts.***

Established: 1950

Mission: “to produce competent graduates, provide need based community service and produce problem-solving research outputs through innovative and creative education, research and consultancy service to foster social and economic development of the country” (Addis Ababa University, n.d.).

People: As shown in Table 1, the ratio of students to employees at Addis Ababa University is roughly 8:1.

Table 1. Addis Ababa University student and employee populations

<u>Students</u>		<u>Employees</u>	
Undergraduate	33,940	Academic	2,408
Graduate	13,000	Operational	3,635
Doctoral	1,733		
<b>Total</b>	<b>48,673</b>	<b>Total</b>	<b>6,043</b>

Data extracted from the website, AAU at a glance (Addis Ababa University, 2015)

### ***About the interviewee.***

I interviewed Satishkumar Belliethathan in September 2014. At the time, Dr. Belliethathan is the A/Director of External Relations, Partnerships and Communications at Addis Ababa University. He is also on the faculty of the Environmental Sciences Programme in the Science Faculty of the university and is a founding member of the Horn of Africa – Regional Environment Centre/Network (HOAREC-N), which is housed in AAU.

Belliethathan was also a lead author on the fifth UNEP Global Environmental Outlook (GEO-5).

### ***Addis Ababa University and the UN.***

The two major UN relationships Addis Ababa University (AAU) maintains in terms of sustainability and environmental work are with UNEP and UNITAR. Under UNEP, AAU is a member of both Mainstreaming Environment and Sustainability in African Universities (MESA) and Global University Partnership for Environmental Sustainability (GUPES). The work with UNEP began when Belliethathan attended a class hosted by UNEP in partnership with the Joensuu University in Finland. During that course, he met the head of the UNEP Environmental Education and Training Unit, which led to AAU joining MESA and ultimately GUPES. Today AAU partners with UNEP in several ways that are critical to the governance of environmental issues in the region. Perhaps the most conspicuous of these relates to migration of White-eared Kob Antelopes between Ethiopia and South Sudan, which has been identified as one of the most significant migrations in the region and has recently been compromised by development and conflict.

In 2011, AAU partnered with the University of Massachusetts Boston and UNEP to secure a multi-million dollar grant from the Integrative Graduate Education and Research Traineeship (IGERT) program at the National Science Foundation. This is a five-year initiative that supports graduate students from UMB and AAU who are researching themes of resilience in coasts and in communities.

Belliethathan attended each of three Yale-UNITAR conferences mentioned in Chapter 3. He has also served as an advisor to that group's the Climate Change Capacity

Development, and following meetings with UNITAR officials during Rio+20, AAU students developed a proposal to launch a youth negotiation on climate change convention (YNCCC).

In addition to these two groups, AAU faculty members act as consultants and advisors to regional groups such as the Intergovernmental Authority on Development and conduct teaching and research on key regional topics such as food security, urbanization, and conflict over natural resources.

A final, critical role that AAU plays in this context is through the Institute for Peace and Security Studies, which AAU helped to establish with the Intergovernmental Authority on Development and the African Union. Through this program, AAU conducts teaching and research related to regional conflict, including conflict-based environmental degradation and conflict over access to natural resources. This program offers both Masters and PhD degrees. This initiative further enhances the region because a good portion of the AAU student body is staff members from other Ethiopian universities.

### **University of Copenhagen.**

#### ***Basic facts.***

Established: 1479

Mission: “to conduct research and provide further education to the highest academic level” (University of Copenhagen, 2014).

People: As shown in Table 2, the ratio of students to employees at the University of Copenhagen is roughly 4:1.

Table 2. University of Copenhagen student and employee populations

<u>Students</u>		<u>Employees</u>	
Undergraduate	23,473	Academic	5,023
Graduate	17,393	Operational	4,249
Doctoral	2,503		
<b>Total</b>	<b>40,866</b>	<b>Total</b>	<b>9,272</b>

Data extracted from the website, University of Copenhagen:

About the University (University of Copenhagen, 2014).

#### ***About the interviewee.***

I interviewed Neil Burgess in October 2014. Dr. Burgess is a Full Professor in Conservation Biology at the University of Copenhagen. He is also the Head of the Science Programme of the UNEP World Conservation Monitoring Centre (WCMC), which is housed in Cambridge University. In addition to WCMC, Burgess's work involves collaborative projects with UNDP, the Global Environmental Facility (GEF), and the UN Programme on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD). He also partners and consults with NGOs and governments as well as UN groups. During the course of the interview, Burgess and I discussed both the University of Copenhagen (UCPH) and Cambridge University, but he clarified that the "university part" of his work is at UCPH. Burgess was a Contributing Author to GEO-5.

#### ***The University of Copenhagen and the UN.***

UNEP-WCMC is a collaboration center, which means that there is a memorandum of understanding between UNEP and the World Conservation Monitoring Center, which is a

not-for-profit organization in the UK. Half of its funding comes from UNEP sources, the other half comes from other UN groups and NGOs as well as from grants. Because of its status as both a not-for-profit and a university-housed program, WCMC has the capacity to seek grant funding both as a technical institution and as a university. All WCMC products must follow UNEP guidelines and be approved through UNEP processes.

Burgess pointed out that much of the work of the WCMC relates directly to UN-based multilateral agreements. For example, through WCMC, Burgess and his team recently helped to develop the Biodiversity Outlook 4 (BGO4) for the twelfth Meeting of the Conference of Parties (COP12) to the Convention on Biodiversity (CBD). They are also working with the secretariat of the newly launched intergovernmental panel of biodiversity and ecosystem services to help develop collaborative relationships with universities and technical institutions around the world for the purpose of conducting analytically rigorous assessments.

As an academic, much of Burgess's work is focused on the science-policy interface. When asked for an example of how his work with UN entities influences his teaching and research, he offered examples of students both supporting the data analysis and using key questions as the heart of their doctoral dissertations.

### **University of Massachusetts Boston (UMB).**

#### ***Basic facts.***

Established: 1965 (as part of the UMass system, which was established in 1964)

Mission: "The University of Massachusetts Boston is a public research university with a dynamic culture of teaching and learning, and a special commitment to urban and global engagement. Our vibrant, multi-cultural educational environment encourages our



broadly diverse campus community to thrive and succeed. Our distinguished scholarship, dedicated teaching, and engaged public service are mutually reinforcing, creating new knowledge while serving the public good of our city, our commonwealth, our nation, and our world” (University of Massachusetts Boston, 2010).

People: As shown in Table 3, the student to employee ratio at the University of Massachusetts Boston is roughly 4:1.

Table 3. University of Massachusetts Boston student and employee populations

<u>Students</u>		<u>Employees</u>	
Undergraduate	10,081	Academic	1,219
Graduate	2,290	Operational	1,651
Doctoral	463		
<b>Total</b>	<b>12,834</b>	<b>Total</b>	<b>2,870</b>

Data extracted from the website, 2014 Statistical Portrait -

University of Massachusetts Boston (University of Massachusetts Boston, 2014).

### ***About the interviewee.***

I interviewed Maria Ivanova in January 2015. Dr. Ivanova is an Associate Professor in the Department of Conflict Resolution, Human Security, and Global Governance, which is housed in the McCormack Graduate School at the University of Massachusetts Boston (UMB). She is also Co-Director of Center for Governance and Sustainability at UMB and Director of the Global Environmental Governance Project within the Center. Her main teaching and research interests are global environmental governance, the performance of international organizations, United Nations reform, and the science-policy interface. She is

currently a member of the Scientific Advisory Board of the UN Secretary-General and was a Coordinating Lead Author on GEO-5.

***The University of Massachusetts Boston and the UN.***

Ivanova's work with the UN system dates back to her time as a doctoral candidate, when she co-taught a course on UNEP as an international organization with Mohamed El-Ashry, the former Director of the Global Environment Facility (GEF). That class produced the first ever unsolicited independent evaluation of UNEP and culminated with a class trip to Nairobi to present the results. That research also directly informed Ivanova's doctoral dissertation, and she has since built her career on studying the effectiveness, challenges, trajectory of UNEP as well as examining challenges related to global environmental governance and UN reform.

Much of Ivanova's teaching and research is focused on UNEP and the UN system. In her classes, she challenges students to analyze UN documents and then shares their feedback with UN administrators, often with real impacts. For example, when the International Environmental Governance (IEG) negotiations were taking place, Ivanova asked her students to review a set of tables UNEP had developed to illustrate the IEG landscape. Based on critical feedback from the students, UNEP updated the final documents. Ivanova builds on this hands-on classroom approach by offering her students as many real world experiences as possible – bringing them to high profile UN meetings and sessions as she can.

As per the reference under AAU, in 2011 UMB partnered with AAU and UNEP to secure a multi-million dollar grant from the National Science Foundation. This initiative has

offered unparalleled opportunities to qualified students and reinforced the relationships between UMB, AAU, and UNEP.

Several years ago UNEP asked Ivanova to write a paper about the level of implementation of multilateral environmental agreements (MEAs). This project revealed that is a real need for empirical research in this arena. It has become a major research project under Ivanova's Center for Governance and Sustainability, and is the topic of one student's doctoral dissertation. Ivanova and her team are now actively partnering with several UN convention secretariats on this project.

Finally, as a part of her role on the UN Secretary-General's Scientific Advisory Board, Ivanova has launched a research project that will examine key themes related to the science-policy interface.

### **Interview Synthesis**

As stated above, I reviewed the transcripts from the interviews with Belliethathan, Burgess, and Ivanova in four main veins: benefits of these partnerships to HEIs, benefits of these partnerships to the UN, factors for and barriers to success; and recommendations. The following sections reflect the responses to the semi-structured interviews, and as such are not empirical.

#### **Benefits of partnerships to universities.**

The main themes that emerge as benefits to HEIs are relationships, resources, access, and legitimacy. These four themes overlap with each other, but it is valuable to spell out how each one surfaced in the discussions.

The respondents highlighted the value of **relationships** in a number of ways. Some of the alliances between UN entities and HEIs are formal and some are informal, and there

are various stages in-between. It seems that a value of any one of them is the connections they build between individuals as well as institutions. Each of the respondents has experienced connecting with colleagues in other institutions by working on or through a UN-based program. For example, Belliethathan and Ivanova first met at a UNITAR conference at Yale University. This has led to a multi-year, multi-faceted collaboration which Ivanova has taken with as she has moved between academic institutions. Building on this, UMB and AAU were able to secure US\$3.1m for the IGERT program, and UNEP is one of the key partners on that grant.

**Resources**, too, appeared in several forms in the three interviews. Funding is certainly an asset that UN entities offer to each group. The amount and type of financial support referenced varied from small amounts for travel and events to mid-level for projects and larger-scale through direct funding. For example, according to Burgess, roughly half of the funding for WCMC comes from UNEP. Burgess also pointed out that being affiliated with a UN entity as well as a university can offer opportunities to secure funding from both. Though this may not translate to more money, it may still result in more opportunities. The discussion of resources also included intellectual information. For example, based on work with GUPES Belliethathan wrote a proposal to green the AAU campus.

**Access** is a similar but separate concept to resources, with the distinction being that resources connotes material flow from one group to the other (e.g. funding from UN to a university), while access is meant to suggest simply making assets available. For example, UN-HEI relationships provide access to events, which is key for both research and visibility and helps to build networks and cultivate multi-disciplinary and multi-stakeholder

processes. Along these lines, data is a critical resource and UN agencies can act as a catalysts for sharing data between governments, institutions, etc... as well as for collaborating on new data collection and analysis. While data is certainly a resource, the ability to participate in these processes might be better categorize as access. Additionally, Belliethathan referenced a UN-HEI initiative that is not catalogued here but has been invaluable to his work, which is the Online Access to Research in the Environment (Online Access to Research in the Environment, n.d.). Created by Yale and UNEP in collaboration with scientific and technical publishers, this database allows academics from developing countries to access peer reviewed publications that might not otherwise be available through their home institutions.

Interestingly, **legitimacy** came up in two distinct ways during the interviews. For AAU and UMB, it is clear that UN involvement has elevated sustainability as an institutional theme. In each case, top administrators have demonstrated engagement and commitment to sustainability, which is enhanced by relationships with UN programs. As referenced in Quote 1, Burgess notes that in Europe, particularly, within academia there is increasing emphasis on applied research that adds value to this sort of work.

“Societal relevance and policy impact and just general impact has become a much more important part of a university’s world. So [researchers are] supposed to also show that their science is having some kind of linkage to either policy or real world questions...and that’s part of how they’re measured as academics...”

Quote 1. Burgess on the value to universities of UN collaboration

### **Benefits of partnerships to UN.**

Perspective, analytical rigor, and passion were the main elements that the respondents referenced with regard to the value universities have to offer UN agencies.

Global dialogues are not always grounded in the context of the real-world. Academic participation can help to infuse these processes and their outcomes with robust data and practical elements, enabling enhanced **perspective** for action and implementation. Along with perspective comes the element of strategic integration. In policy – whether it is global, local, or anywhere in-between – there is a tendency toward siloes, which can lead to parallel activities rather than integrated solutions. As referenced in Quote 2, the respondents emphasized that academia can help to develop solutions that cross disciplines and therefore offer integrated solutions.

“In Ethiopia for the farmer the environment is the seed, the land, the water, the cattle, the life fence, his home, everything... it’s fundamental and all encompassing. So when that is your perspective, how you understand environmental issues will be completely different from how you might think when you think that the environment is the National Park.”

Quote 2. Belliethathan on the need for grounded, holistic solutions

In governance, particularly, there is a need to constantly challenge the status quo, verify assumptions, identify gaps, and seek innovations. Academia is well-suited to meet this need for fresh perspectives. Faculty members must continually seek and publish about new knowledge to stay at the cutting edge, and faculty members and students constantly

challenge each other in the exploration of challenges. As per Quote 3, because the mandate of a given university is tied to knowledge, not advocacy, faculty researchers can stay the course in the face of financial or political variability. This is a key distinguishing factor between academia and NGOs, as is the fact that most faculty members have longer-term employment and job security than NGO or Intergovernmental Organization (IGO) employees. Academics are also increasingly entering the applied research space, so the capacity for implementation is growing.

“Universities provide a research capability that is driven mostly by passion. It’s not driven by money. It’s not driven by decree. It is driven by passion. And therefore it’s much more durable [than NGOs] in the face of adversity.”

Quote 3. Ivanova on key distinguishing factors between HEIs and NGOs

In turn, institutions that demonstrate this constant quest for new knowledge and hands-on teaching and research are attractive to action-oriented students. These students challenge their faculty members and administrators, conduct research, and ask difficult questions. They can also help to organize events and run programs and they can serve as audiences and critics. When these students become directly involved in UN program work, there is reciprocal value: They can add the youth perspective to the current dialogue. This sort of exposure can not only help to shape their scholarship, but it also prepares tomorrow’s professionals to enter their fields – either with Intergovernmental Organizations or on other paths – with informed perspectives.

### **Key elements of and barriers to successful collaborations.**

I asked each respondent to talk about challenges to working with UN entities. This line of inquiry yielded a set of responses that also included key ingredients for success. This combination of barriers and positive elements can be distilled down to relationships, time, organization, and money.

Burgess pointed out that the “personal **relationship** part of these big UN processes is remarkably important.” On the one hand, participating in these activities can help to build relationships and cultivate collaboration. At the same time, there is a tendency for people to work with the people they know or to gravitate toward others in their field, which is a challenge when working toward integrated solutions. Since global environmental challenges require multi-disciplinary approaches, this is something that all groups involve should try to address. However, there is an additional barrier in that researchers and experts in different disciplines frequently do not speak the same language. It is not uncommon to have two disciplines use the same set of terms but have completely different definitions for them. Were one to ask an ecologist, an economist, and a sociologist to define the term “resilient,” for example, the answers might appear unrelated. As per Quote 4, this means that participating individuals must be prepared to speak multiple disciplinary languages and accommodate varying priorities and tactics.

“...you have to have skillful people who are able to navigate that very narrow bridge between academic rigor and politically feasible and politically correct types of articulations of those conclusions.”

Quote 4. Ivanova on the requisite characteristics of individuals in these partnerships



**Time** and trust may help to overcome the downside of relationship management in this context. However, time was certainly referenced as a challenge by all three respondents. As mentioned in Quote 5, relationships take time to cultivate. They also benefit from dynamic leadership, and to get to larger-scale, fruitful collaboration may take several years during which trust, resources, and value accrue. Unfortunately, in forming relationships, there is a tendency to expect immediate gratification or results. Should the relationship not yield short-term tangible benefits, the perceived value may be compromised and possible participants may disengage. Added to the challenge of time is that of institutional timeframes. Policy needs to happen immediately. Everything is urgent, which, according to Ivanova “doesn’t quite jive with the academic calendar and the academic culture... [or] with the rigor that is required for serious research.”

“A [relationship] cannot grow immediately. You need a period of incubation, and institutions need to be committed to actually work through that period of incubation.”

Quote 5. Belliethathan on the need to take time to develop relationships

Along these lines, research priorities tend to be long-term and because the two types of organizations are focused on different outcomes – HEIs on research and teaching and

UN

“...if we say, you know, ‘everything’s going to shit’ then ... maybe all the countries leave the CBD and that would be worse than saying ‘well, it’s not very good, but there are signs of hope.’”

Quote 6. Burgess on conflict between academic outcomes and political needs

organizations on policy outcomes and capacity building – expectations may not be aligned. UN organizations may want fast, useful answers, where academics will not only want to take the time to ensure that they are giving the most analytically robust information. Researchers may also be more interested in why things happen, rather than how it might be addressed. In addition, as referenced in Quote 6, the analytically rigorous outcomes from academia may not be consistent with what UN groups or policymakers want to hear. Similarly, in order to maintain credibility in their own fields, academics may be unwilling to simplify or filter research outcomes to suit the needs of policymakers.

Misalignment and **organizational challenges** were also common themes when the respondents were asked whether they had experienced conflict between UN entities. The UN is a collection of member states, each of which expects to have a say in the outcomes of UN processes – particularly when funding is voluntary. All three respondents were involved with the drafting of GEO-5, for example, and while their direct experiences as authors were varied there was a shared sentiment that that process was hampered both by the organizational systems of the UNEP and by the government review process. In addition, due largely to government inputs the resulting document was stripped of content that might have spurred more progressive action. See Box 1 for more information on the GEO.

#### Box 2. Global Environmental Outlook

Every five years UNEP issues a *Global Environmental Outlook (GEO)* – a comprehensive document that offers insights on a comprehensive array of environmental topics at the global scale. Released just in advance of Rio + 20, the fifth of these, GEO-5, offered assessments of progress on 90 internationally agreed goals and objectives, as well as overviews of regional challenges and successes, and recommendations for possible policy

solutions (UNEP, 2012). The process for developing GEO-5 took several years, with each chapter being drafted by upwards of 20 experts from around the world. In addition to UNEP, funding for the project came directly from multiple governments and one development bank. Following the release of GEO-5 UNEP developed a suite of tools for use by various stakeholder groups as a complement to the full report.

The GEO chapter authors hail mainly from government agencies, academia, think tanks, and UN groups. It is noteworthy that the three faculty members who were interviewed for this dissertation all participated in the GEO-5 process. While this effort was not targeted at academia, it is an excellent example of UNEP engaging experts to contribute to an analytically rigorous process and outputs.

Beyond direct influence of member states, as highlighted in Quote 7 there are conflicts between UN entities for funding and for government attention. This speaks to how the organizations are communicating with each other and governments, as well as how effective they are at producing results. Ivanova described this as a “closed loop that needs to be broken” and pointed out that the UNEP was originally created as a means to address this and to help foster effectiveness and communications, but it has not succeeded. This conflict of priorities has also been known to occur within an entity. For example, UNEP established GUPES to revitalize and enhance MESA and similar regional groups, but the way that it is structured as made it redundant.

“We tried really hard for maybe six months to find ways for three UN agencies to work together, but they all had different reporting requirements and different systems... They ended up with three different projects run by three different UN agencies that were vaguely related to each other. The government was not very happy at the end of the day

Quote 7. Burgess recounting a scenario where the priorities of two UN groups did not align

An additional organizational challenge that came to light was that while academics must adhere to certain standards and protocols in order to be recognized as experts, it is not uncommon for a UN agency administrator to take on management or leadership roles without technical expertise. This can become problematic, as those leaders may become overly reliant on others for informed decision-making. While academics can and should help to fill this gap, issues of time, priorities, and expectations may hinder progress.

**Funding** was touched on by each interviewee as an issue, but not really as a direct need. Instead, the respondents referred to several funding-related challenges. The first of these was that the UN processes frequently require competition between institutions for funds. The second was that UN professionals are broadly compensated for their work, and may not be attuned to the fact that researchers and technical experts may have more granular funding structures. Thirdly, the participation of faculty members may be limited by insufficient funds. For example, there is a sizable registration fee to attend the CITES COP and academic budgets for conference attendance may be limited or restricted. Added to this, academia is not categorized as a Major Group so academics seeking entrance must either come from institutions with not-for-profit status or must find another affiliation.

That said, touched on in Quote 8, none of the respondents cited funding as a major barrier to collaboration. The interviewees mainly referred to it just as a factor to be recognized and overcome.

“The funding is never the first challenge. Often people give it as the first problem or obstacle...Not enough money is not the core problem. It’s ...the symptom....I recognize it as an issue, but it is not the foremost issue. If ...the priorities can be coordinated, synchronized, if the politics can be figured out, and if the timeframes can be synchronized, I think the money will come.”

Quote 8. Ivanova on funding as a challenge

### **Looking forward and looking around.**

In recent years, there has been a conspicuous effort to engage non-governmental voices in global dialogues: The World Business Council for Sustainable Development is actively engaged in the process of developing the Sustainable Development Goals, for example. However, there remain significant barriers to direct involvement of academic institutions in global processes. Along these lines, the final batch of questions focused on the role that academia could and should play in the upcoming global sustainability events, as well as recommendations to UN agencies and other universities on whether and how to establish collaborative relationships.

The responses to these questions reaffirmed many of the earlier answers. All three respondents agreed that these partnerships offer value to the UN and to academia and beyond. The particular assets that universities offer to UN programs and processes include

credibility in the form of analytically rigorous data and outcomes, support for implementation of national commitments, and unbiased technical expertise. Universities can also play an important role in their communities, and can be a catalyst between global compacts / national policies and local action: AAU and UMB are also directly involved with regional capacity building for UN programs. As is evidenced in Chapter 3, there is work to be done on the UN side to enhance and clarify opportunities.

All concurred that the UN agencies should commit to creating pathways to engage the right individuals and institutions, but that wholesale blitz to engage HEIs for the sake of engagement would not be advantageous for either side. First, these relationships tend to be built with individuals rather than institutions so the pathways to participation should be tailored to engage topic-specific academic experts. Second, because the official channels for participation are limited, faculty members may be reluctant to get involved, as the processes may offer limited value. Third, while some UN processes are theoretically constructed to engage faculty, these opportunities may not currently be apparent to pertinent faculty, and interest levels may not be high even if they are. The upshot of this line of dialogue was that UN entities should figure out both how to pose questions to be answered by academia and how to build communication channels with the right individual academic thought-leaders. In particular, Ivanova suggested that the Academic Council on the UN system might establish a task force to address this question and propose a solution to the UN. In tandem with this, Ivanova pointed out that most universities are mainly focused on the student experience and that universities might consider shifting some of their attention and resources from students to faculty. While she has found it valuable for students to participate and take that experience with them into their professional lives,

creating opportunities for faculty creates institutional value beyond the relatively short-term residency of students.

That said, Ivanova also pointed out that the creation of the UN Secretary-General's Scientific Board, which is largely composed of faculty members from around the world, is a signal of the rethinking of the value added of academia to global policy making. Among other things, that group has been tasked with developing recommendations for how universities should be included in the UN Major Groups. In theory, HEIs can participate as a major group either through the NGO group or the science and technology group. Both of these are problematic, however. Public universities are government agencies and therefore may not qualify as NGOs, and not all academics who might become involved are in fields that are traditionally considered science or technology. In addition, according to Ivanova the science and technology group is mainly controlled by the International Council for Science, which she points out has not historically been a strong ally for university participation in global processes.

A final and critical set of responses that arose in this set of questions had to do with how UN groups collaborate with institutions in developing countries versus developed countries. Burgess pointed out that in Europe there is a trend toward applied research that means researchers will be increasingly eager to collaborate, and as per Quote 9, Ivanova reinforced that US HEIs have tremendous capacity to contribute. However, UN efforts to build capacity are more likely to involve direct engagement in developing countries. Ivanova mentioned that UNEP, for example, focuses nearly all of its programming in developed countries even though most of its funding comes from developed countries and developed countries are where some of the biggest global sustainability challenges are.

While the work that AAU does in supporting implementation of national commitments and capacity building in the region is undeniably critical, it seems folly not fully engage academic resources from around the world.

“... if there is one thing that North America has as a region that no other region in the world has it is ...the multiplicity of absolutely amazing, fantastic universities where you have committed faculty and you have committed students.”

Quote 9. Ivanova on Engaging Universities from Developed Countries

In terms of the quality and character of partnerships between HEIs and UN entities, one point that came up is that HEIs are more similar to UN entities than other groups because both are value-driven operations. People tend to work for both of these types of institutions because they are committed to the type of work. As such, the motivation comes from inside, and the frequently research is value-driven, not objective.

To conclude this chapter: The insights offered by Belliethathan, Burgess, and Ivanova are just three perspectives, so the evidence is not universal or scalable. However, given the rich and diverse ways these researchers are collaborating with the United Nations, their insights hold real value when considering what might happen next. The conclusion chapter contains a synopsis of their recommendations alongside the key results from the landscape review.



## **Conclusion**

I set out to explore relationships between UN groups and HEIs in developing smarter solutions to global sustainability challenges. My foundational assumptions for this study were that there is a need for global-scale governance of many topics related to environmental sustainability; that the current mechanisms and systems for addressing global challenges are insufficient; that polycentric and partner-based approaches have the potential to enhance current activities; and that universities have the potential to enhance the abilities of the UN and national governments to address sustainability challenges – in terms of implementation, accountability, and capacity building; and alliances between universities and UN agencies have the potential to offer significant benefits and reward to both sides. I used the literature to ground these assumptions and to inform the two main questions that I sought to answer through my research and analysis:

1. What official mechanisms for participation do UN entities offer for HEIs?
2. From the HEI perspective, what are the benefits and barriers to collaborating with UN agencies?

The two sets of research I conducted to explore these lines of inquiry yielded distinct but compatible results.

### **UN Programs**

As referenced in Chapter 1, partnerships for sustainable development are particularly effective for the distribution of knowledge, particularly when a scenario merits input from a variety of experts, and they have also proven effective as a tool for developing tailored solutions to complex challenges or issues that require locally tailored solutions (Andonova & Levy, 2003). HEIs are particularly well-suited to these foci, but the opportunities for

engagement on sustainability challenges are currently limited and those that exist are not all robust. Of the 10 UN programs that I reviewed for this dissertation, many have outdated and / or unclear language on the websites and the process for becoming involved was often obscure. One key conclusion, therefore, is that the UN entities that offer partnership opportunities for HEIs should clarify their purpose, the process, and the outcomes.

### **HEI Perspectives**

Each of the faculty members I interviewed works on projects that involve regulation, participation, and implementation – the rationales for partnership highlighted in Chapter 1. Each respondent finds these collaboration invaluable in terms of applied research, engaged teaching, access to data and resources, and participation in processes. However, the shared sentiment was that these relationships require a fair degree of nuance and a wholesale approach to establishing partnerships is not effective. The interviews demonstrated that the efficacy of partnerships is frequently driven by individual people – both in the UN entities and in HEIs. The UN groups that are mainly focused on sustainable development might also consider how to structure initiatives to effectively include strategic engagement academia rather than ad hoc or convenient partnerships. For example, processes such as developing the GEO reports might evolve to offer more comprehensive and inclusive calls for participation rather than the seemingly ad hoc current approach to convening familiar experts by subject area. There might also be clear and universal language to set expectations of balanced relationships – where both sides commit resources, receive value, and are held accountable. Given that HEIs are increasingly rewarding faculty for applied research and teaching, this sort of clarity might attract fresh talent from a variety of disciplines.

## Recommendations

While there is my research does offer evidence that universities are well-suited to assist the UN and national governments, it also revealed a substantial set of weaknesses and opportunities to improve. Recommendations from these two batches of research can be distilled to seven key concepts:

- UN groups should improve channels for participation – possibly starting by creating a Major Group for academia and allowing free access to major events such as convention conferences.
- Networks and UN Groups should seek strategic alliances based on need, authentic interest, and expertise, not on convenience or political jockeying.
- UN Groups should seek relationships with individuals rather than institutions.
- Projects and outcome should be designed to adapt to the varied paces of academia and policymaking.
- In any of these relationships, both sides should commit resources, receive value, and be held accountable.
- UN groups should reevaluate whether redirecting some funds and opportunities toward developed country institutions might enhance effectiveness.
- Faculty members from HEIs in developed countries might consider collaboration with HEIs in developing countries as a mean of gaining entrance.

As referenced in Chapter 1, attributes that define effective partnerships include: collaboration to develop and distribute knowledge; partnership on tailored solutions to complex issues; mechanisms to include participation from a variety of experts; and support for implementation, capacity building, and adaptive capacity. Were they embraced by the

UN and HEIs alike, the elements I have listed here would improve the capacity of both to raise awareness about challenges and solutions, facilitate dissemination and accreditation of information, develop and distribute technological assistance for specific issues, and create and disseminate new knowledge and products. Alliances formed with these principles would be smart partnerships, indeed.

## Next Steps

The literature review, landscape review, and interviews yielded considerable and important questions for future research. The top three areas that emerge are:

- *University status in the UN System.* At the meta-level, university participation and recognition of the value of academic inputs could be enhanced by creating a category of Major Group for academia and allowing free access to major events such as convention conferences – although it would be important to qualify that these organizations have the capacity to assist with implementation and capacity building and should not be limited to research insights.
- *Reconsideration of North and South.* The lion's share of UN funding comes from developed countries and is distributed in developing countries. While this may be an effective way to support particular institutions or initiatives in nations where resources are scarce, it may preclude participation of a remarkable array of knowledgeable potential change-makers.
- *Global trends toward applied scholarship.* The term “campus as a living lab” emerged a few years ago as a way to highlight teaching and research with real world impact. Confining the concept to the campus and labeling it with a term typically associated

with natural science is fundamentally limiting, however. As HEIs further conceptualize this important concept, there is a remarkable opportunity to consider how academic institutions can directly participate in developing and implementing solutions to sustainability challenges at all scales.

- *The Post-2015 Agenda*. I defended this dissertation in the May 2015, just four months before the release of the Sustainable Development Goals and six months before the UNFCCC COP21. These are two milestones in global governance of the commons that promise to reshape entirely the geopolitical dialogue around sustainability solutions. It is my hope that these will yield an extraordinary set of opportunities for HEIs to become participate, help build capacity, implement, and transfer knowledge.

I look forward to exploring these topics as a next step in my scholarly path.



## **Appendix 1. Semi-structured Interview Questions**

This interview is about your organization and your specific experiences as a university professional working with UN entities. I am also looking for your expert insights on the value of alliances between universities and UN entities, however. Some of these questions will be directed at that line of inquiry, but please feel free to offer additional thoughts at any point.

- Please describe for me some of the work that you do with UN entities: which groups you have worked with most substantively, for how long, and what some of the outcomes were.
- Did these partnerships come with tangible benefits? Such as funding, access to data, or access to events or people?
- Can you give me a sense of the value to the organizations you partner with? What can you and your institution provide that they cannot do themselves?
- What are some of the assets that universities offer that other institutional partners, such as business or NGOs, do not have?
- How would you describe the benefits of working with the UN to your academic work? Is this work foundational for your research? Are your students involved?
- What are some of the challenges you have encountered in partnering with these groups?
- If you work with more than one UN entity, have you ever experienced institutional conflict between groups?
- Is your academic institution a member of any of the UN or UN-related networks such as GUPES or the United Nations Sustainable Development Solutions Network? If so, how

valuable is that? How valuable do you think networks like that are for engaging universities in global sustainability dialogues?

- As we head into 2015 there is a lot going on for global environmental governance. Historically, higher education institutions have not been particularly included in dialogues – they're lumped in with NGOs. In recent years, it seems like there is more of an effort to engage non-governmental voices, though: Businesses are now being given a voice both with the SDGs and with the climate change negotiations, for example. Do you sense any changes in how universities might contribute to the upcoming discussions and commitments?
- Would you recommend to UN entities that they increase opportunities for collaboration with universities? Why or why not? If yes, how?
- Would you recommend to other universities that they seek these sort of alliances? Why or why not? How?
- Thinking through how different countries and regions interact with the UN, would you say that the value of this sort of work might vary by regional context?
- Going forward, do you anticipate continuing or expanding this work? Why or why not?
- Do you have any final thoughts on the value of collaborations between universities and UN agencies?



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### Literature cited

- Abdallah, S., Michaelson, J., Shah, S., Stoll, L., and Marks, N. (2012). *Happy Planet Index: 2012 Report (A global index of sustainable well-being)*. London: new economics foundation. Retrieved from <http://www.happyplanetindex.org/data/>
- Addis Ababa University. (2015, January). AAU at a glance. Retrieved January 19, 2015, from <http://www.aau.edu.et/about/aau-at-glance/>
- Addis Ababa University. (n.d.). Mission and Vision | Addis Ababa University. Retrieved January 17, 2015, from <http://www.aau.edu.et/about/mission-and-vission/>
- Andonova, L. B., and Levy, M. A. (2003). Franchising Global Governance: Making Sense of the Johannesburg Type II Partnerships. In O. S. Stokke & Øystein B. Thommessen (Eds.), *Yearbook of International Co-operation on Environment and Development*. London: Earthscan Publications Ltd.
- Biermann, F., Chan, M., Mert, A., and Pattberg, P. (2008). Multi-stakeholder Partnerships for Sustainable Development: does the promise hold? In P. Glasbergen, F. Biermann, & A. P. J. Mol (Eds.), *Partnerships, Governance and Sustainable Development: Reflections on Theory and Practice*. Cheltenham, UK ; Northampton, MA: Edward Elgar Pub.
- Binkerhoff, J. M. (2008). Partnership as a Means to Good Governance. In P. Glasbergen (Ed.), *Partnerships, Governance and Sustainable Development: Reflections on Theory and Practice*. Cheltenham, UK ; Northampton, MA: Edward Elgar Pub.
- Brinkerhoff, J. M. (2008). Partnerships as a Means to Good Governance: toward an evaluation framework. In P. Glasbergen (Ed.), *Partnerships, Governance and Sustainable Development: Reflections on Theory and Practice*. Cheltenham, UK ; Northampton, MA: Edward Elgar Pub.

- Carcasson, M. (2010). Facilitating Democracy: Centers and institutes of public deliberation and collaborative problem solving. *New Directions for Higher Education*, 2010(152), 51–57. <http://doi.org/10.1002/he.412>
- Central Intelligence Agency. (2014, June). The World Factbook. Retrieved January 17, 2015, from <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2001rank.html?countryname=Ethiopia&countrycode=et&regionCode=afr&rank=69#et>
- Commission on Global Governance. (1995). *Our Global Neighborhood: The Report of the Commission on Global Governance*. Oxford University Press, USA.
- Diesendorf, M. (2000). Models of sustainability and sustainable development. In *Sustainability: The corporate challenge of the 21st century 2*.
- Esty, D. C., and Ivanova, M. H. (2002). Realizing Global Environmental Governance: a Function-Driven Approach. In D. C. Esty & M. H. Ivanova (Eds.), *Global Environmental Governance : Yale's Environment School*. New Haven, CT: Yale School of Forestry & Environmental Studies. Retrieved from <http://environment.research.yale.edu/publication-series/782>
- French, H. F. (December 1994). Making Environmental Treaties Work. *Scientific American*. Retrieved from <http://www.dhushara.com/book/diversit/extra/treat.htm>
- Galaz, V. (2014). *Global Environmental Governance, Technology and Politics: The Anthropocene Gap*. Northampton, MA: Edward Elgar Pub.
- Galaz, V., Crona, B., Österblom, H., Olsson, P., and Folke, C. (2012). Polycentric systems and interacting planetary boundaries: Emerging governance of climate change – ocean acidification – marine biodiversity. *Ecological Economics*, 18, 21–32.



- Gallopín, G., and Raskin, P. D. (2002). *Global Sustainability: Bending the Curve*. Routledge.
- Glasbergen, P. (2007). Setting the Scene: the partnership paradigm in the making. In P. Glasbergen, F. Biermann, & A. P. J. Mol (Eds.), *Partnerships, Governance and Sustainable Development: Reflections on Theory and Practice*. Northampton, MA: Edward Elgar Publishing.
- Goddard, J. T. (2010). Encyclopedia of Case Study Research. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Collective Case Study* (pp. 164–166). Thousand Oaks, CA: SAGE Publications, Inc. Retrieved from <http://knowledge.sagepub.com/view/casestudy/n59.xml>
- Hsu, A., Emerson, J., Levy, M., Sherbinin, A. de, Johnson, L., Malik, O and Jaiteh, M. (2014). *Environmental Performance Index*. New Haven, CT: Yale Center for Environmental Law and Policy and Columbia Center for International Earth Science Information Network. Retrieved from <http://epi.yale.edu/epi>
- Hüfner, K., and Renner, M. (2014, July). Total UN System Contributions. Retrieved from <https://www.globalpolicy.org/tables-and-charts-ql/27505-total-un-system-contributions.html>
- Kjaer, A. M. (2004). *Governance* (1st ed.). Polity.
- König, A., and Evans, J. (2013). Introduction: experiments for sustainable development? Living laboratories, social learning, and the role of the university. In A. König (Ed.), *Regenerative Sustainable Development of Universities and Cities The Role of Living Laboratories*. Cheltenham, UK ; Northampton, MA: Edward Elgar Publishing.

- Leach, M. (2013). Pathways to Sustainability: Building Political Strategies. In E. Assadourian, *State of the World 2013: Is Sustainability Still Possible?* (1 edition). Washington, DC: Island Press.
- Online Access to Research in the Environment. (n.d.). OARE | Online Access to Research in the Environment. Retrieved January 26, 2015, from <http://www.oaresciences.org/about/en/>
- Organisation for Economic Co-operation and Development. (2015a, March). List of OECD Member countries - Ratification of the Convention on the OECD - OECD. Retrieved April 24, 2015, from <http://www.oecd.org/about/membersandpartners/list-oecd-member-countries.htm>
- Organisation for Economic Co-operation and Development. (2015b, March). What we do and how - OECD. Retrieved April 24, 2015, from <http://www.oecd.org/about/whatwedoandhow/>
- Ostrom, E. (2008). *Polycentric Systems as One Approach for Solving Collective-Action Problems* (SSRN Scholarly Paper No. ID 1304697). Rochester, NY: Social Science Research Network. Retrieved from <http://papers.ssrn.com/abstract=1304697>
- Ostrom, V., Tiebout, C. M., and Warren, R. (1961). The Organization of Government in Metropolitan Areas: A Theoretical Inquiry. *The American Political Science Review*, 55(4), 831. <http://doi.org/10.2307/1952530>
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed). Thousand Oaks, Calif: Sage Publications.
- Pérez, J. A. P. V. y M. F. (n.d.). Ranking Web of World universities 2011 [Text.Homepage]. Retrieved October 28, 2011, from <http://www.webometrics.info/>

- Porter, M. E. (1998). *Competitive Strategy: Techniques for Analyzing Industries and Competitors* (1 edition). New York: Free Press.
- Pradhan, M., and Mariam, A. (2014). The Global Universities Partnership on Environment and Sustainability (GUPES): Networking of Higher Educational Institutions in Facilitating Implementation of the UN Decade of Education for Sustainable Development 2005–2014. *Journal of Education for Sustainable Development*, 8(2), 171–175. <http://doi.org/10.1177/0973408214548383>
- Recchia, S. P. (2002). International Environmental Treaty Engagement in 19 Democracies. *Policy Studies Journal*, 30(4), 470–494. <http://doi.org/10.1111/j.1541-0072.2002.tb02159.x>
- Retta, N., and Desse, G. (2012). Spotlight Issues 11.2 : The Role of Higher Education in Reducing Food Security in Africa. In Global University Network for Innovation (GUNI) (Ed.), *Higher Education in the World 4: Higher Education's Commitment to Sustainability: from Understanding to Action* (Vol. 4). Hampshire, England: Palgrave Macmillan.
- Santos, F. C., and Pacheco, J. M. (2011). Risk of Collective Failure Provides an Escape from the Tragedy of the Commons. *Proceedings of the National Academy of Sciences*, 108(26), 10421–10425. <http://doi.org/10.1073/pnas.1015648108>
- Schipper, L., and Pelling, M. (2006). Disaster Risk, Climate Change and International Development: Scope for, and Challenges to, Integration. *Disasters*, 30(1), 19–38. <http://doi.org/10.1111/j.1467-9523.2006.00304.x>
- Schwartzberg, J. E. (2013). *Transforming the United Nations System: Designs for a Workable World*. Tokyo, Japan ; New York, NY: United Nations University Press.

- Speth, J. G. (2010, January). *A New American Environmentalism and the New Economy*. Presented at the The 10th Annual John H. Chafee Memorial Lecture: National Council for Science and the Environment, Washington, DC. Retrieved from [http://ncseonline.org/CMS400Example/uploadedFiles/01\\_NEW\\_SITE/4\\_Conference/2010\\_Green\\_Economy/A\\_New\\_American\\_Environmentalism\\_and\\_the\\_New\\_Economy\\_final%5B1%5D.pdf](http://ncseonline.org/CMS400Example/uploadedFiles/01_NEW_SITE/4_Conference/2010_Green_Economy/A_New_American_Environmentalism_and_the_New_Economy_final%5B1%5D.pdf)
- Speth, J. G., and Haas, P. (2006). *Global Environmental Governance: Foundations of Contemporary Environmental Studies* (1st ed.). Island Press.
- Stake, R. E. (1995). *The Art of Case Study Research*. SAGE.
- Sustainable Development Solutions Network. (2012). Sustainable Development Solutions Network. Retrieved October 13, 2012, from <http://unsdsn.org/>
- Thiele, L. P. (2011). *Indra's Net and the Midas Touch: Living Sustainably in a Connected World*. Boston: The MIT Press.
- Tilbury, D. (2012). Higher Education for Sustainability: A Global Overview of Commitment and Progress. In *Higher Education in the World 4: Higher Education's Commitment to Sustainability: from Understanding to Action* (Vol. 4, pp. 18 – 35). Hampshire, England: Palgrave Macmillan.
- Tollefson, J., and Gilbert, N. (2012). Earth Summit: Rio report card. *Nature*, 486(7401), 20–23. <http://doi.org/10.1038/486020a>
- UN Department of Economic and Social Affairs. (2013, August). Division for Sustainable Development :: Areas of Work :: Partnerships - About - Mandate - Bali Guiding Principles. Retrieved December 13, 2014, from

[http://sustainabledevelopment.un.org/content/dsd/dsd\\_aofw\\_par/par\\_mand\\_baliguidprin.shtml](http://sustainabledevelopment.un.org/content/dsd/dsd_aofw_par/par_mand_baliguidprin.shtml)

UN Department of Economic and Social Affairs. (n.d.). About Major Groups and other stakeholders .. Sustainable Development Knowledge Platform. Retrieved July 17, 2015, from <https://sustainabledevelopment.un.org/aboutmajorgroups.html>

UN Environment Programme. (2006). The MESA ESD Innovations Toolkit. Retrieved November 24, 2014, from <http://unep.org/Training/mesa/toolkit.asp>

UN Environment Programme. (2012). *Global Environmental Outlook 5* (5th ed.). Nairobi: UNEP. Retrieved from <http://www.unep.org/geo/>

UN Environment Programme. (n.d.-a). About UNEP: Priorities. Retrieved November 28, 2014, from <http://www.unep.org/about/Priorities/tabid/129622/Default.aspx>

UN Environment Programme. (n.d.-b). Environmental Education and Training Unit , UNEP. Retrieved December 13, 2013, from <http://www.unep.org/training/programmes/gupes.asp>

UNEP Environmental Education and Training Unit. (2012). *Global Universities Partnership on Environment and Sustainability (GUPES): Official Launch*. Shanghai. Retrieved from <http://www.pnuma.org/educamb/Red%20de%20Formacion%20Ambiental/Contenido%20GUPES/Docs%20GUPES%20-PNUMA%202012/2%20GUPES-Short%20Report-GUPES%20at%20Tongji%202012.pdf>

UNEP Environmental Education and Training Unit. (2013). *UNEP/DEPI/EETU 4th Issue: Global Universities Partnership on Environment and Sustainability (GUPES) Newsletter* (Newsletter). UNEP.

UNEP Tongji Institute of Environment for Sustainable Development. (n.d.). IESD-Hot Link.

Retrieved November 28, 2014, from [http://unep-](http://unep-iesd.tongji.edu.cn/index.php?classid=471)

[iesd.tongji.edu.cn/index.php?classid=471](http://unep-iesd.tongji.edu.cn/index.php?classid=471)

UNEP-Tongji Institute of Environment for Sustainable Development. (n.d.). UNEP-Tongji

Institute for Environment and Sustainable Development. Retrieved August 21, 2012,

from <http://unep-iesd.tongji.edu.cn/index.php?classid=900>

United Nations. (1992, June). Agenda 21: The United Nations Programme of Action from

Rio. Retrieved November 8, 2011, from <http://www.un.org/esa/dsd/agenda21/>

United Nations. (2002). Plan of Implementation of the World Summit on Sustainable

Development. Johannesburg: United Nations.

UN Department of Economic and Social Affairs. (n.d.). Higher Education Sustainability

Initiative: Sustainable Development Knowledge Platform. Retrieved December 29,

2014, from <http://sustainabledevelopment.un.org/index.php?menu=1073>

UN Educational, Scientific and Cultural Organization. (n.d.-a). Introducing UNESCO.

Retrieved December 10, 2013, from

<http://www.unesco.org/new/en/unesco/about-us/who-we-are/introducing-unesco/>

UN Educational, Scientific and Cultural Organization. (n.d.-b). Mission | Education | United

Nations Educational, Scientific and Cultural Organization. Retrieved December 21,

2014, from <http://www.unesco.org/new/en/education/themes/strengthening-education-systems/higher-education/mission/>

UN Educational, Scientific and Cultural Organization. (n.d.-c). Partners | Education | United

Nations Educational, Scientific and Cultural Organization. Retrieved December 14,

2014, from <http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development/partners/>

UN Educational, Scientific and Cultural Organization. (n.d.-d). UNITWIN / UNESCO Chairs Programme | UNESCO. Retrieved December 22, 2014, from <https://en.unesco.org/unitwin-unesco-chairs-programme>

UN Educational, Scientific and Cultural Organization. (n.d.-e). University-Industry Partnerships | United Nations Educational, Scientific and Cultural Organization. Retrieved December 23, 2014, from <http://www.unesco.org/new/en/natural-sciences/science-technology/university-industry-partnerships/>

UN Educational, Scientific and Cultural Organization. (n.d.-f). University Twinning and Networking | | UNESCO. Retrieved December 22, 2014, from <http://www.unesco.org/en/university-twinning-and-networking/university-twinning-and-networking/>

UN Environment Management Programme. (2012). *Global Environmental Outlook 5: Environment for the future we want*. Nairobi, Kenya: United Nations Environment Programme. Retrieved from <http://www.unep.org/geo/geo5.asp>

UN Environment Programme. (1972). *Declaration of the United Nations Conference on the Human Environment*. Stockholm. Retrieved from <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503>

UN General Assembly. Resolution Adopted by the General Assembly [on the report of the second Committee (A/47/719)], Pub. L. No. Agenda Item 79 (1993). New York:

United Nations Department of Economic and Social Affairs. Retrieved from  
<http://www.un.org/documents/ga/res/47/ares47-191.htm>

UN General Assembly. (2009, December). Resolution adopted by the General Assembly on  
 24 December 2009 [ on the report of the Fifth Committee (A/64/482/Add.1) ].  
 Retrieved from  
[http://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/64/248](http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/64/248)

UN General Assembly. Resolution adopted by the General Assembly on 21 December 2012 [ on the Report of the Second Committee (A/67/437/Add.1)], Pub. L. No. 67/203  
 (2012). United Nations General Assembly. Retrieved from  
[http://www.un.org/en/ga/search/view\\_doc.asp?symbol=A/RES/67/203](http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/67/203)

UN Human Settlements Programme. (2011). *Habitat Partner University Initiative Charter and Terms of Reference*. Nairobi: United Nations Human Settlements Programme.

UN Human Settlements Programme. (n.d.-a). Goals & strategies of UN-Habitat – UN-Habitat. Retrieved December 14, 2014, from <http://unhabitat.org/about-us/goals-and-strategies-of-un-habitat/>

UN Human Settlements Programme. (n.d.-b). Habitat UNI – UN-Habitat. Retrieved December 14, 2014, from <http://unhabitat.org/urban-initiatives/habitat-university-network-initiative-uni/>

UN Human Settlements Programme. (n.d.-c). History, mandate & role in the UN system – UN-Habitat. Retrieved December 14, 2014, from <http://unhabitat.org/about-us/history-mandate-role-in-the-un-system/>



UN Human Settlements Programme. (n.d.-d). UN-Habitat at a glance – UN-Habitat.

Retrieved December 13, 2014, from <http://unhabitat.org/about-us/un-habitat-at-a-glance/>

UN Human Settlements Programme. (n.d.-e). UN-HABITAT.: Habitat UNI | Thematic Hubs.

Retrieved December 14, 2014, from

<http://mirror.unhabitat.org/content.asp?typeid=19&catid=657&cid=11775>

UN Institute for Training and Research. (2014). *UNITAR at a glance*. United Nations

Institute for Training and Research. Retrieved from

<http://www.unitar.org/sites/default/files/uploads/unitar-factsheet2014.pdf>

UN Institute for Training and Research. (n.d.-a). Third Conference on Environmental

Governance and Democracy, 5-7 September 2014 | UNITAR Yale Conference.

Retrieved December 14, 2014, from <http://conference.unitar.org/yale2014/>

UN Institute for Training and Research. (n.d.-b). UNITAR | Knowledge to Lead. Retrieved

December 14, 2014, from <http://www.unitar.org/>

UN Institute for Training and Research. (n.d.-c). UNITAR Programme at the Yale School

Forestry & Environmental Studies for Diplomats Accredited to the United Nations |

United Nations Institute for Training and Research (UNITAR). Retrieved December

13, 2013, from <http://www.unitar.org/ny/international-law-and-policy/fellowship-at-yale-Environmental-studies>

United Nations Secretariat. (2014, December). Assessment of Member States' contributions to the United Nations regular budget for the year 2015. United Nations Secretariat.

Retrieved from

[http://www.un.org/ga/search/view\\_doc.asp?symbol=ST/ADM/SER.B/910](http://www.un.org/ga/search/view_doc.asp?symbol=ST/ADM/SER.B/910)

United Nations University. (n.d.-a). About the Institute for Natural Resources in Africa -

United Nations University. Retrieved December 26, 2014, from

<http://unu.edu/about/unu-system/inra/about-the-institute-for-natural-resources-in-africa#background>

United Nations University. (n.d.-b). About UNU - United Nations University. Retrieved

December 14, 2013, from <http://unu.edu/about/unu>

United Nations University. (n.d.-c). Associated Institutions - United Nations University.

Retrieved December 27, 2014, from <http://unu.edu/about/unu-system/associated>

United Nations University. (n.d.-d). Centre for Policy Research - United Nations University.

Retrieved December 26, 2014, from <http://unu.edu/about/unu-system/centre/centre-for-policy-research#overview>

United Nations University. (n.d.-e). History and Background - United Nations University.

Retrieved December 27, 2014, from <http://unu.edu/about/unu/history#overview>

United Nations University. (n.d.-f). PARTNERS - United Nations University Institute for

Water, Environment and Health. Retrieved from <http://inweh.unu.edu/partners/>

United Nations University. (n.d.-g). UNU Centre – Tokyo - United Nations University.

Retrieved December 23, 2014, from <http://unu.edu/about/unu-system/centre/hq#overview>

United Nations University. (n.d.-h). UNU Council - United Nations University. Retrieved

December 23, 2014, from <http://unu.edu/about/unu-council>

United Nations University. (n.d.-i). UNU System - United Nations University. Retrieved

December 26, 2014, from <http://unu.edu/about/unu-system>

University of British Columbia. (n.d.). The University of British Columbia - UBC.ca.

Retrieved May 4, 2012, from <http://www.ubc.ca/>

University of Copenhagen. (2014, September). About the University. Retrieved January 19,

2015, from <http://introduction.ku.dk/presentation/>

University of Massachusetts Boston. (2010, September). University of Massachusetts

Boston | Mission & Values. Retrieved January 19, 2015, from

[http://www.umb.edu/the\\_university/mission\\_values](http://www.umb.edu/the_university/mission_values)

University of Massachusetts Boston. (2014, September). 2014 Statistical Portrait -

University of Massachusetts Boston. Retrieved January 19, 2015, from

[http://www.umb.edu/oirp/statistical\\_portraits/2014\\_statistical\\_portrait#Faculty%20&%20Staff](http://www.umb.edu/oirp/statistical_portraits/2014_statistical_portrait#Faculty%20&%20Staff)

UN Sustainable Development Knowledge Platform. (n.d.). Major Groups .. Sustainable

Development Knowledge Platform. Retrieved April 12, 2015, from

<https://sustainabledevelopment.un.org/majorgroups>

Vasconcelos, V. V., Santos, F. C., & Pacheco, J. M. (2013). A bottom-up institutional approach to cooperative governance of risky commons. *Nature Climate Change*, 3(9), 797–801.

<http://doi.org/10.1038/nclimate1927>

Walsh, B. (2012, June 26). What the Failure of Rio+20 Means for the Climate. *Time*.

Retrieved from

<http://content.time.com/time/health/article/0,8599,2118058,00.html>

Whitfield, T. S., and Hickerson, C. (2012). The Difficult Transition? Teaching, Research,

Service: Examining the Preparedness of Communication Faculty Entering the

Academe. *Journal of the Scholarship of Teaching and Learning*, 13(1), 1–23.

- Wijkman, A., and Rockström, J. (2012). *Bankrupting Nature: Denying Our Planetary Boundaries*. Routledge.
- World Commission on Environment and Development. (1987). *Report of the World Commission on Environment and Development: Our Common Future* (No. Annex to document A/42/427 - Development and International Co-operation: Environment). New York: United Nations. Retrieved from <http://www.un-documents.net/ocf-ov.htm#I.3>
- World Maritime University. (n.d.). Serving the global maritime community through education, research and capacity building. Retrieved December 14, 2013, from <http://wmu.se/>
- World Trade Organization. (2014, June). WTO | Understanding the WTO - members. Retrieved April 24, 2015, from [https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org6\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm)
- Yin, R. K. (2009). *Case Study Research: Design and Methods*. SAGE.
- Zifcak, S. (2009). *United Nations Reform: Heading North or South?* (1st ed.). Routledge.